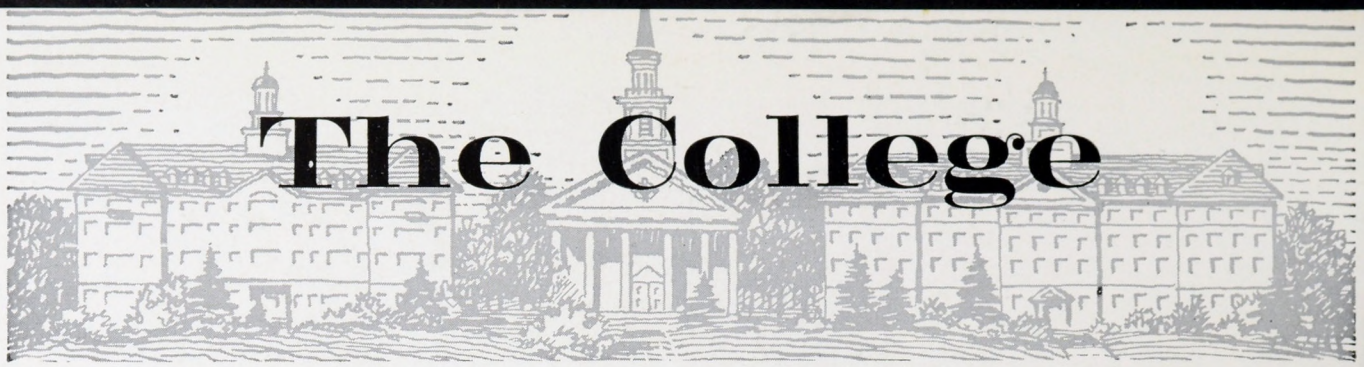
MIDDLEBURY COLLEGE

Your Family and Middlebury

Sent by the College to Middlebury Parents and Friends

Autumn 1965



Committee Named to Study Future Course of College

President James I. Armstrong has announced the appointment of a special *Ad Hoc* Committee on Student Life to study what course the College should take as a result of the planned expansion in enrollment. The President has asked the Committee to prepare a report containing its recommendations.

Dean Thomas H. Reynolds has agreed to chair the Committee. President Armstrong noted that Dean Reynolds, perhaps more than any other single member of the Middlebury community, has worked most intensively for the past eight years in the whole area of student life and is highly qualified for the important responsibilities of the chairmanship. The Committee will be representative of the major constituencies of the College—the students, the faculty, the trustees, and the alumni.

The President in his charge to the Committee said:

The time is upon us when we must see clearly the consequences of expansion for new social and living arrangements. There are a number of alternative courses which are under consideration. These need examination by a group of persons who care about education, and education at Middlebury, and who are representative of the major constituencies of the College. Clearly the deliberations of this group will involve the future role which fraternities are to have at Middlebury, what kinds of objectives the College should have for the paracurricular life of its students and what sort of arrangements will best achieve these ends.

President Armstrong in making this announcement to parents in YOUR FAMILY AND MIDDLEBURY has indicated that Dr. Dennis O'Brien, Dean of Men and Dr. Bruce B. Peterson, '56, a member of the Faculty Educational Policy Committee, have been invited to attend the meetings of the Committee. The President also said:

Members of Middlebury fraternities and of their governing boards may wish to submit their views to the Ad Hoc *Committee. I am sure such expressions of views will be welcomed by the Committee, for the College is seeking the best possible steps in expanding and strengthening the total educational program. All constituencies should have a voice and should be heard.*

The members of the Committee: Dean Reynolds (chairman); George E. Yeomans, '33, President of the National Alumni Association; Mrs. Mary Williams Brackett, '36, President of the Middlebury Alumnae Association; Mrs. Alice Guest Howson, '30, Trustee of the College; Foster R. Clement, Jr., '27, Trustee of the College; J. H. Dow Davis, '66, President of the Interfraternity Council; David T. Stonington, '66, President of the Student Association; Sandra E. Steinglass, '66, Vice President of the Student Association; Dean Elizabeth B. Kelly; Douglas A. East, '54; and Lester W. Ingalls, '41.

College Dedicates New Language Facility

Middlebury College's complete and modern language facility—the Edwin S. S. Sunderland Language Center and the Charles A. Dana Auditorium—was dedicated this fall in special ceremonies presided over by President James I. Armstrong.

Following the dedication an honorary Doctor of Laws degree was conferred on Charles A. Dana, New York manufacturer whose foundation gave the funds to construct the auditorium bearing his name. The Dana Foundation also set up a special scholarship program at Middlebury with a grant last spring.

The new building is unique in the country for its versatility and completeness of audio-visual facilities for learning languages. Middlebury, known throughout the country and abroad for its language education, considers this new center an important addition to its program.

The Language Center is the first of three major building projects included in the $6.6 million Middlebury Challenge program. Now in the planning stage are Music and Fine Arts and Science Centers.

Named for the late Mr. Sunderland, an alumnus and long-time trustee of the College, the Center provides Middlebury with finest of language teaching facilities. The following four pages will furnish the reader with additional information about the Center and the Charles A. Dana Auditorium.

Your Family and Middlebury

Vol. 9, No. 1—GEORGE H. HUBAN, *Editor*—Autumn 1965

IN THIS ISSUE

	Page		Page
A New Focus on Language Study	3	President's Convocation Address	20
Parents' Weekend Address	7	Middlebury's Science Needs	22
Faculty Forum	8	Sports	27
Books of Merit	11		Cover IV

Cover: Exterior and interior views of the new Sunderland Language Center and the Charles A. Dana Auditorium.

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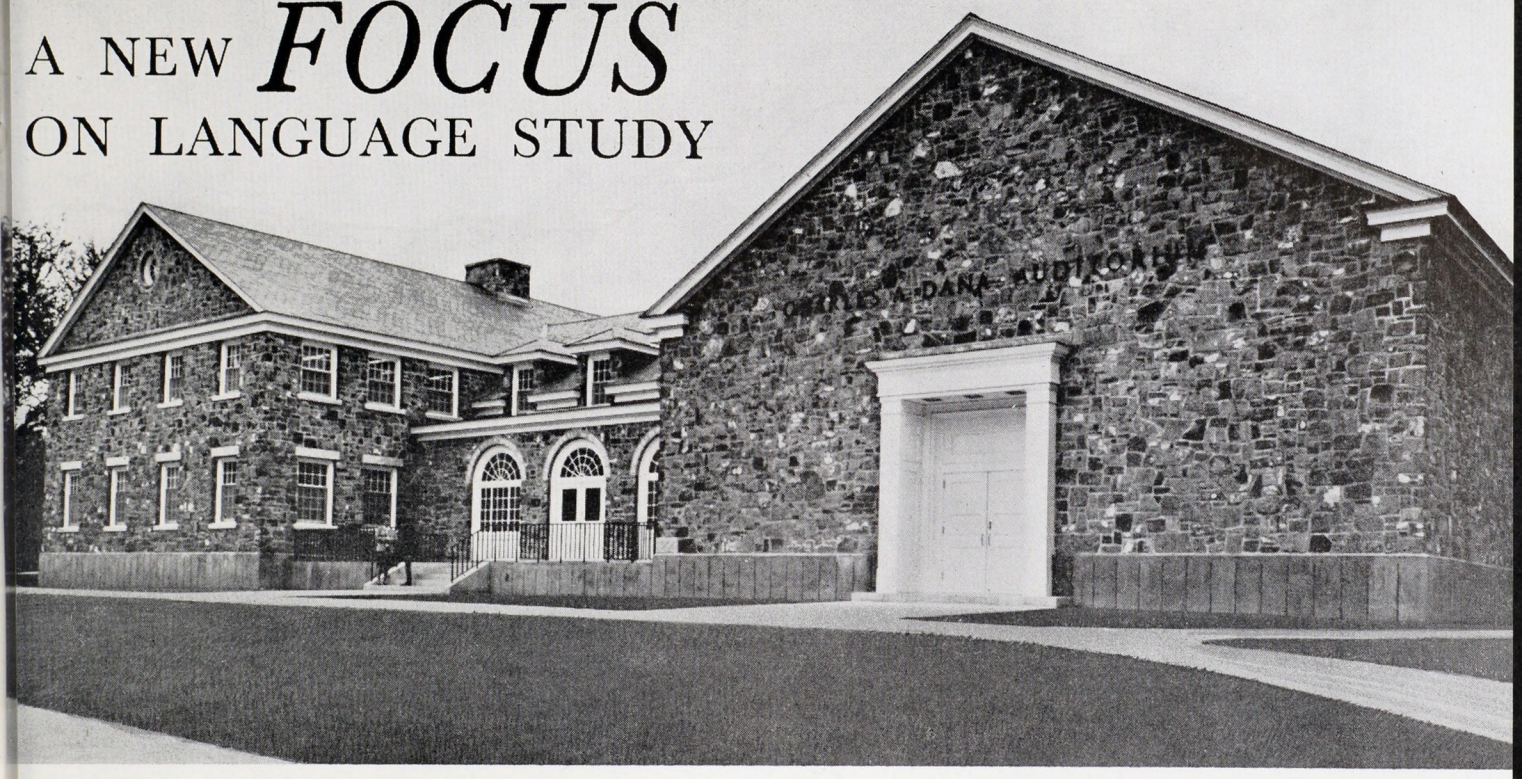
A NEW *FOCUS* ON LANGUAGE STUDY



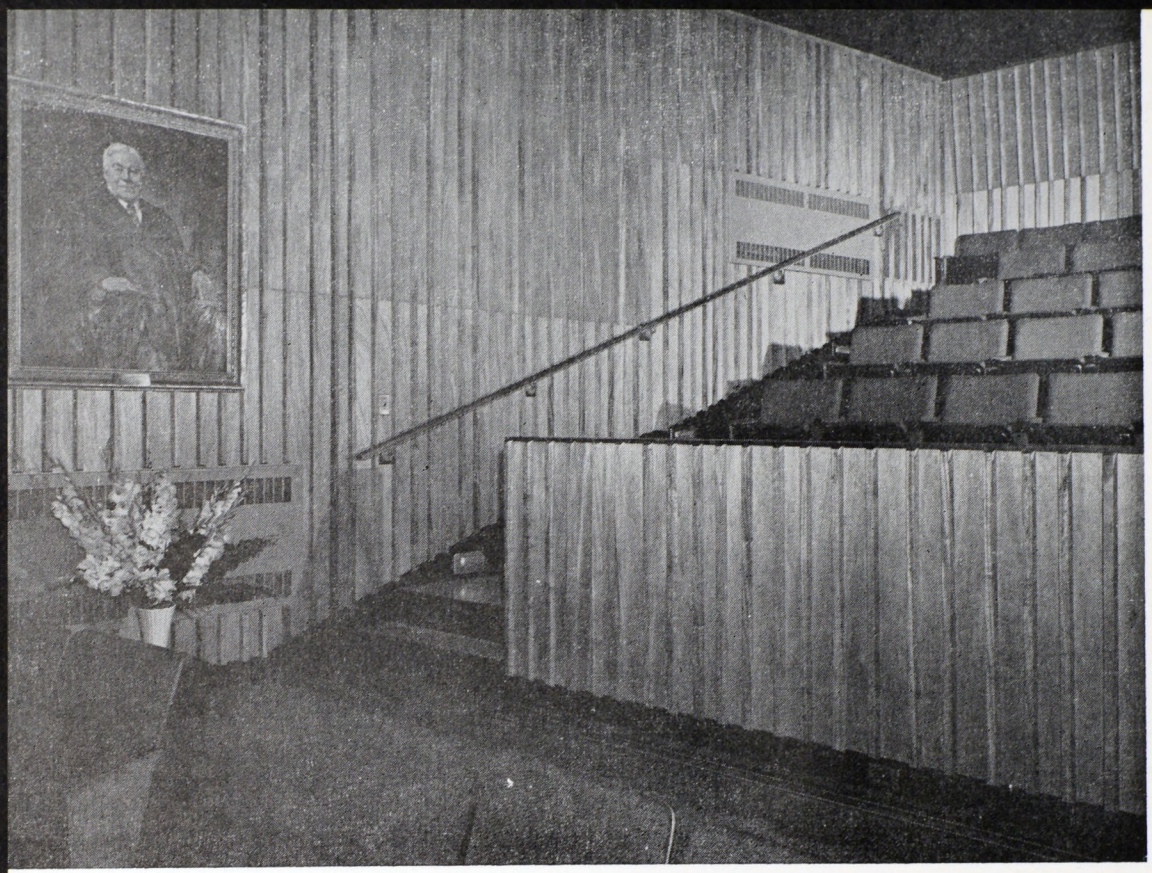
With the completion of the Edwin S. S. Sunderland Language Center and the Charles A. Dana Auditorium, Middlebury College will now be able to serve the language drill and instruction of undergraduate students during the regular undergraduate year, and the graduate students during the Summer Sessions. Effective new language teaching techniques worked out and tested experimentally will be employed fully in this new language facility. These new techniques comprise the "library" type of language laboratory developed at Middlebury to secure greater use of facilities and more productive use of teacher time. For example, in the classrooms, the College will be able to give linguistic and grammatical explanations or instructions one day a week to all students for a particular skill, thus permitting smaller classes of six or eight in other skills. Following these sessions, by the use of individual studios, students will be able to drill themselves, not only on pronunciation, oral comprehension and oral expression, but on grammar and syntax by self practice study. Individual skill results will be tested both in the laboratory and small classroom groups.

Since individual drill is the basis for command of a language, each student will experience more practice drill than would be allowed him in the brief time available for recitation in a conventional class. Furthermore, with each student able to work at his own pace and according to his individual need, the varied degrees of secondary school preparation are compensated and insufficient preparation may be properly remedied.

With much of the laboratory work being conducted by technical personnel rather than teachers, there will be a great saving of faculty personnel and time. This is an important factor at a time when Middlebury and higher educational institutions everywhere are faced with greater numbers of young people seeking higher education.

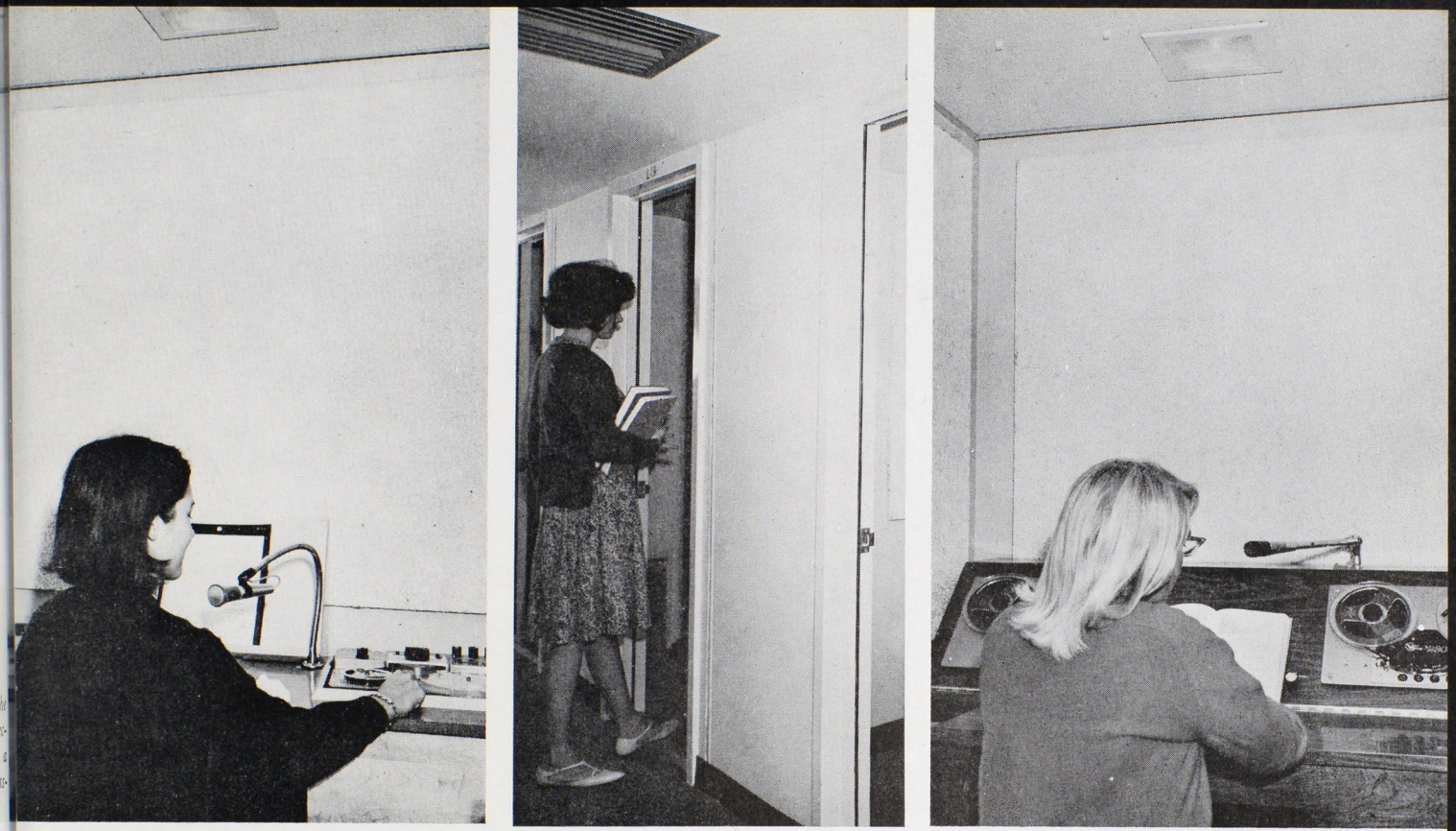
Middlebury now has a facility unique in its operation, its equipment and design. A graceful union has been realized between technical, pedagogical advances and the basic humanistic tradition of foreign language study. The Center and Auditorium centralize and separate the diverse functions which the College, through its universally recognized leadership in this area, is called upon to perform: student practice facilities; audio-visual classrooms; preparation and reproduction of materials; and administrative offices.

The pictures on these pages will give the reader a glimpse of some activities of this new area. At the time these photographs were taken, the Materials Development Studio, Sound Reproduction Room and Experimental Laboratory had not been completed.



A rear view of the interior of the Charles A. Dana Auditorium. Section to right can be enclosed by a sliding partition for an audio classroom.

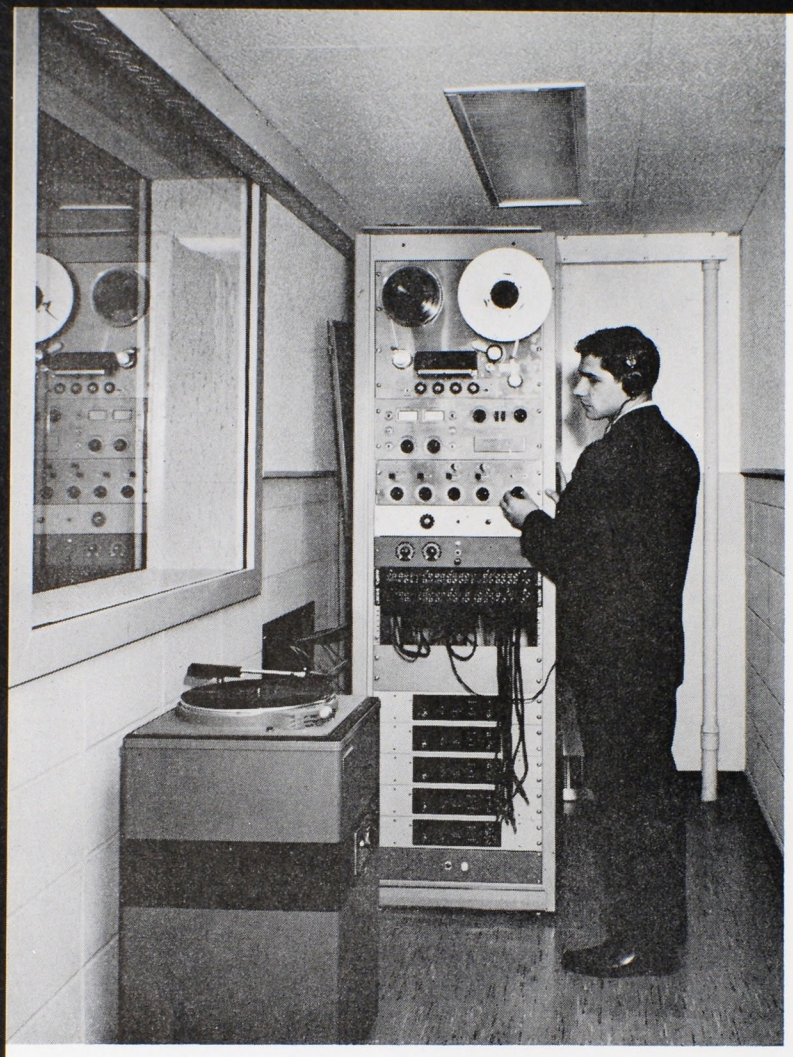
At the reception desk in the lobby of the Center, students reserve individual studios. Panel of lights on wall to rear of receptionist indicates when studios are in use. At the present time, twenty-one studios are operational. Forty-two additional studios will be equipped and opened with funds contributed to the Middlebury College Challenge Fund. To the rear of the reception desk, a large area is devoted to a tape and record library. Recordings used as course material are found in the individual studios, but for literature courses or advanced independent study, the student can consult the library's card catalogue and listen to titles of special interest. Among these titles will be those recordings of entire courses chosen among the most outstanding offered during the previous summer.



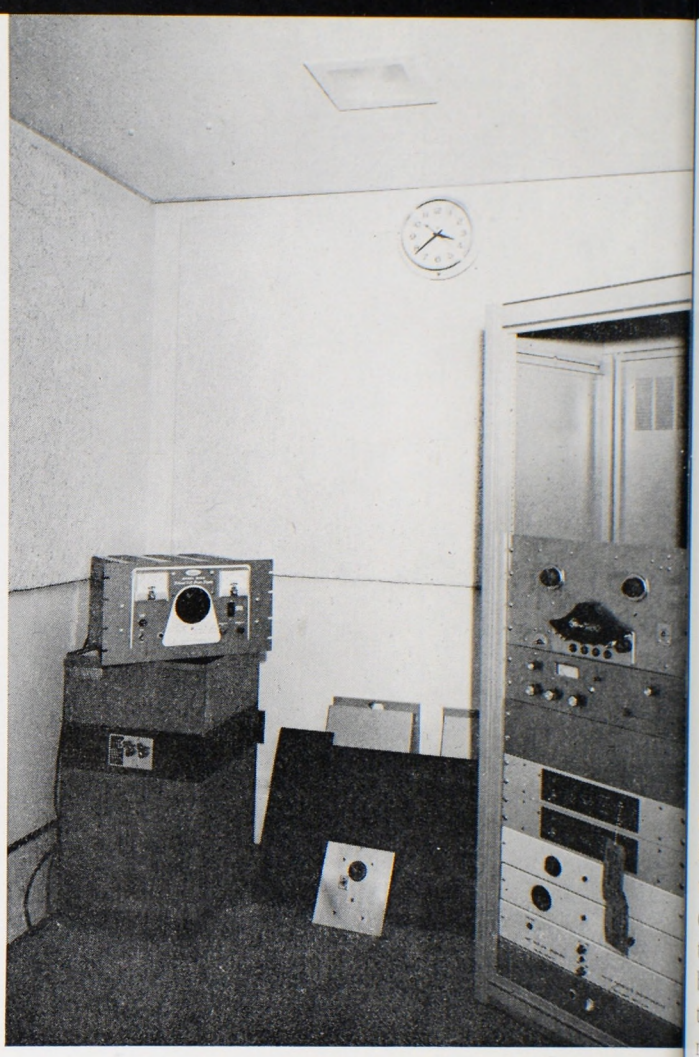
Practice rooms, offering the privacy and opportunity for independent study analagous to the music studio and the library carrel, may be reserved by the student for the amount of time commensurate with course requirements and his individual needs. Studios are located on small corridors on three levels. Each studio is sound-proof and the basic equipment includes tape playback and recording machines, combined—for independent or simultaneous operation—in a console which has been developed and perfected at Middlebury. The machine (left) is an older model being phased out of use by the College in favor of the prototype machine (right) developed by Middlebury College during the past six years. The newer model will be installed in studios as funds become available.

Fifty seat audio-visual class-room makes possible the bringing together of two sections of a language course for lectures on certain disciplines in which the equipment of this component can be used to the best advantage. The room will be equipped for motion picture, filmstrip and synchronized slide showings, overhead projection, record and tape playback. It also has a transparency copier. Lectures given in this room can be recorded by the Center's central studio.

Professor Watkins is shown teaching his class in Advanced Grammar, Composition and Stylistics.



Master console serves to make master recordings for course work from the small studio to the left of the console. Recordings can also be made of lectures, choral groups, and panel discussions in the Charles A. Dana Auditorium. From this point the technician can remotely control the projection room in the Auditorium. Plans have been formulated for making recordings from Wright Theatre and the proposed Fine Arts Center.



Three transmission rooms for faculty use are located on the main floor of the Center, and adjacent to the tape library. Above, one of the transmission rooms being assembled at the time this issue of YOUR FAMILY AND MIDDLEBURY *was going to press. From these rooms teachers will be able to contact students in one or all sixty-three studios for the purpose of individual instruction, listening in on a student's progress, or for special purposes such as group testing, etc.*

Classrooms in the Center will have audio-visual equipment and can be divided into two seminar rooms. At the time this photograph was taken the furniture had not arrived.

The Qualities of Middlebury

In a Parents' Weekend address, a parent reflects on the role of the College in the lives of its students

(*By* WILLARD G. ROUSE)

Co-Chairman of the Parents' Committee

First, it is my great pleasure to welcome the new parents.

I'm told that Parents' Weekend at Middlebury is different from other institutions' "parents weekends," and well it should be because Middlebury is different from most other institutions of learning. Not just because it's a small liberal arts college; there are many small liberal arts colleges.

Perhaps the difference is expressed in the Middlebury College Challenge Fund brochure where it says, "Architectural beauty is not to be admired from a distance but lived with on intimate terms, as the two chapels that remain ever familiar to each Middlebury student. History is not a set of facts to be memorized and forgotten, but a mandate requiring each of us to add something to the civilization we inherited. Science is not a set of magic tricks by which the initiated manipulate nature, but a system of thought which enables each generation to penetrate further into the mystery of existence. Middlebury students do not have these values preached to them. They absorb them, because these values permeate their campus."

Or perhaps President Armstrong expressed the difference by his challenge to the students when he closed an address with these words: "Look to your inheritance. Build on it. You will want to stand, have convictions, act thoughtfully. Thought is certainly one of the great hallmarks of the educated man or woman—and thought is invisible, but the invisible may become audible in *words* and visible perhaps in *action*. You will be speakers of words and doers of deeds, and you must be thoughtful if you are to speak rightly and do rightly, for like the things of the spirit which are strong and never perish, so right thought is strong."

It is difficult to express the qualities of goodness, decency, wholesomeness, thoughtfulness and warmth about this institution that make it stand out to those of us who know it and love it so.

Deborah S. Crehan, '64, in her reflection on four years at Middlebury said, "We have spent four glorious years, we sing in the Alma Mater. Sentimentality and ceremony and words like "glory" offend most of our generation. Yet there was a certain fullness and a density about those years that we will remember."

You're so right, Deborah Crehan, so will your parents remember. We will remember bringing you and your classmates here in 1960.

We will remember how we and you were treated when we paid our first visit to this campus. We arrived (some of us) skeptically and departed fearful that Middlebury might become skeptical about us and turn us down. At that point we were already so imbued with the "Middlebury spirit" that the thought of not being accepted presented the possibility of a great catastrophe. Do you remember?

But of all the memories of Middlebury the one that stands out is shared mostly by those of us parents who have enjoyed with your generation a commencement. We remember the qualities that Middlebury has given you that we see carrying you through life; the self-assurance, the security, the tranquility, the respect for others, and their views (even your parents' views) and the greatest of all—intellectual curiosity. These things we will remember, and we will not only remember now but we will continue to remember as we see the influence of Middlebury affect your motives, your yardsticks and your goals.

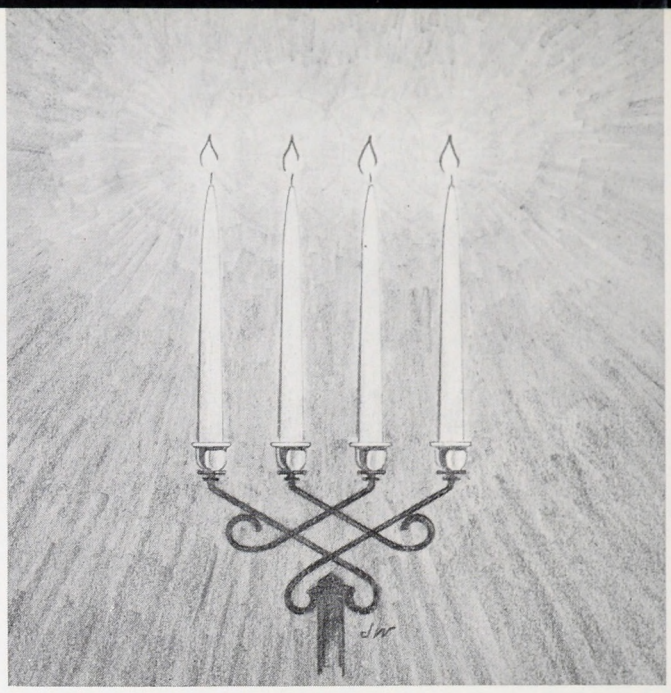
But Miss Crehan, there is one point in your reflections where we must part company. Your generation may *say* that "sentimentality" and "ceremony" and words like "glory" offend you, but yours is a sentimental generation which you prove here at Middlebury time and time again. A recent visitor to your campus was expounding to me the virtues of Middlebury—Why do the students there show so much respect for the property? There's no defacing of the walls, etc. Deborah, the reason is plain, old-fashioned garden variety "sentimentality": these walls, these trees, these lawns, these buildings are treated as a sacred trust by the students and have been treated so for generations.

Your generation may not like the *word* "glory," but you contradict yourselves when you truly describe the "glory" of Middlebury by saying: "If I had to create a small liberal arts college, this is how I would do it. I like the friendly size, the close faculty-student relationship, the spirit of intellectual enthusiasm. A wholesome atmosphere conducive to learning."

Repeated in your contemporaries' remarks, "Other students are 'warm and friendly,' 'enthusiastic and courteous,' 'of high caliber,' 'sincere and honest.'" These statements from your alumni magazine express in your generation's words what we of our generation express as the "glory" of Middlebury.

This is a college where all students feel that "someone cares." The someone is ever changing: one day a fellow student or perhaps a professor, another day someone in the village or even a visitor. But this campus does say loudly, "Everybody here is a somebody," and treats them accordingly.

FACULTY FORUM



WILLIAM B. CATTON

Associate Professor of History

A fairly easy way to produce an awkward silence among any group of historians is to ask them to define their discipline. This silence, together with the rambling and inconclusive dialogue that would probably follow it, seemingly reinforces the charge often leveled by scholars in other fields, to the effect that history is no discipline at all, but merely an unbelievably slipshod way of going about an inherently unimportant task. People in the humanities often dismiss as plodding compilers and copiers who construct dull books in cinderblock fashion by laying facts end to end. As we recoil from this assault, we are met by a barrage from the other side—from political scientists, economists, sociologists, and others of that ilk—who claim that history lacks method, system, form, or rationality, and is so vague and subjective a branch of knowledge as to be unable to establish anything of real significance.

At its worst, unfortunately, history is vulnerable on these counts. But at its best—and as a professional historian with an abiding commitment to his subject I am convinced that its "best" is the truest measure of our craft—history can claim legitimacy as a discipline with much of value to offer.

In the beginning, for the historian, is the Word—that is, the written record of past events, the endless variety of documents upon which any serious historical work is based. Teachers of history must try to convince the student of a two-fold reality: first, that his concern is not with the "facts" themselves but with the written record of them (which is a very different matter indeed); and, secondly, that a familiarity with some part of this written (*Please turn to page 10*)

ROBERT PACK

Assistant Professor of English

Some years ago, a student sued a famous college because, after four years of study, he had not achieved wisdom. Many of us jokingly hoped that he would win. But of course he lost; wisdom, everybody knows, is not teachable. And yet I cannot help but feel that this student had a point—a point so terribly at odds with the prevailing attitude toward education as to seem absurd. By that I mean, everything called A Subject in college is treated as if it were an object; one studies the material as if it really existed apart from the student, apart from the teacher, apart from the human mind that receives it. But in speaking of literature, this is ridiculous; indeed it violates the common goal of all art—which is to affect men's lives, to give them pleasure, and to broaden their sense of what it means to be human. As Samuel Johnson put it, "The only end in writing is to enable the reader better to enjoy life or better to endure it." Though wisdom cannot be taught, yet it can be learned—if we mean by wisdom the self-understanding achieved by studying the great artists' representations of the world and of human character. It is not enough merely to know what an artist thinks or how he manipulates his symbols—that is only the difficult and necessary beginning. What matters finally is how this touches the individual's life, how, out of his own experience, he enters into dialogue with the poem, novel or play. Most students are shocked when this is asked of them —this demand is too great, it is worse than asking that they be prepared and informed.

The literary artist is first of all a craftsman. He approaches his material knowing that he must give it form, and the student must (*Please turn to page 10*)

Four Teachers View Their Disciplines

BRUCE B. PETERSON
Assistant Professor of Mathematics

Students today are better prepared and more deeply committed to scholarship than ever before. As a result the problems facing them and their professors are different from, but no less serious than, the problems which faced us all as undergraduates. For the teacher the most serious problem is that of maintenance of a dynamic equilibrium among the three components within his discipline—content, method, and form. The correlative question of balance within the entire educational experience is not under discussion here.

Content, method and form are easily defined, at least for our purposes, but their recognition in the field, so to speak, may be quite difficult. For us, the content of a discipline is the large body of factual material the discipline encompasses. It is material which can be absorbed by our students with comparatively little guidance. Method needs no description. Professionalism, in any discipline, depends upon method. It leads to further discovery of content, so that, if education is to be a continuing process, training in method cannot be delayed. A successful college education must impart method in at least one discipline.

Form, however, is the distinctive mark of the highest levels of scholarship. The aesthetic element of any discipline constitutes its form. This aesthetic component always exists, although it may well be invisible to the layman in the discipline. Form is necessary for scholarship, but it may not be sufficient.

The relative emphasis given to each of these components varies from discipline to discipline and from course to course within the (*Please turn to page 19*)

NORMAN B. SCHWARTZ
Instructor in Anthropology

The major problem in teaching anthropology stems from the nature of culture, and culture is the major concern of anthropology. Culture may be defined as a group's "design for living," as the way in which the members of a society define reality, adjust themselves to the natural world and their own inner drives, and define for themselves the nature of man and the good life. Culture is a human invention. It is not simply a definition of experience, it *is* human experience. Anthropologists deal with this experience in comparative and evolutionary terms.

Human cultures vary widely, and they vary profoundly. This variation is a direct consequence of an evolutionary heritage which has released men from genetically controlled and innate responses to the world and to themselves. Each society has to invent and learn a world in which to live, and this invented world anthropologists like to call culture. Each society necessarily exists in some sort of invented world, usually one which is distinct from that of other societies. Without a culture a human group does not persist; without a culture a group is not human at all. In evolutionary terms, culture is a socially transmitted, adaptive instrument. To some degree, one culture is the adaptive equivalent of any other culture. One reason cultural variation is possible is that a variety of invented worlds will, however differently, satisfy the needs of men. These alternate and equivalent worlds are the consequence of man's evolutionary history.

Insofar as a culture is emotionally and intellectually meaningful to the members of a society, it is experienced as natural, morally (*Please turn to page 19*)

WILLIAM B. CATTON

(*Continued from page 8*)

record—a "knowledge of the facts," as the student usually says—is only a beginning.

The historical discipline includes three major aspects, each involving a different assortment of skills and procedures. These aspects may be delineated as examination, interpretation, and presentation. In the first phase, the relevant documents are located and examined, and their reliability verified. This process is the most "scientific" aspect of the historian's work, requiring a painstaking and systematic search, assessment, analysis, and comparison of the available evidence. Such procedures, which can be taught and must be learned, involve a rigorous methodology that may justly be called a "discipline."

Having assembled, inspected, and verified his "facts," the historian must then decide what they mean. Interpretation is probably the most important and difficult process of all. Historical facts, contrary to popular assumption, never "speak for themselves," nor do they automatically form patterns from which conclusions naturally emerge. Only the individual historian can discover meaning, detect pattern, and draw conclusions from the evidence before him. Obviously, interpretation is a subjective process requiring an elusive set of intellectual skills; they can be sharpened by experience and example, but they cannot be learned by mere mastery of procedures. The qualities in demand here are such intangibles as balance, logic, perspective, and above all, insight—the ability to perceive relationships, make inferences, and form plausible conclusions.

Finally, and by no means least, the historian must present his case. However carefully he has mastered the evidence, however brilliantly he has derived meaning from it, his findings are valueless until he has communicated them —whether as lecture, article, term paper, essay, or book. This is fundamentally a creative process. It is the "artistic" side of the historian's discipline, differing only in degree from the creative efforts of novelist, playwright, or poet. Though bound by his material (and by certain professional canons, such as the expository prose form) in a way that the aforementioned writers are not, the historian is equally a creator; and his success depends, no less than theirs, upon his skill with words. Logical organization, an artistic sense of proportion, and clarity of style must be ranked beside methodological precision and interpretive insight, as indispensable attributes of the historical discipline.

We cannot, of course, transform all of our students into professional historians. But the undergraduate history major need not go this far in order to derive benefit. To begin with, he will learn a little—often more than a little—about the techniques of analysis, interpretation, organization, and expression. He should learn to observe more closely, think more deeply, reason more precisely, and write more clearly—and these will be assets, wherever he goes.

But the student of history can derive far more than factual knowledge or intellectual technique. He will discover that the documents (*Please turn to page 26*)

ROBERT PACK

(*Continued from page 8*)

come to see that the artist's commitment to his craft implies his knowledge that thought, feeling and energy are paradoxically released *only* through discipline. Thus the student too must develop a love for and a delight in the craft of literary art. The poet's use of language is essentially metaphorical; its function is evocation and innuendo, and it differs vastly from the way in which language is ordinarily used. The beginning student is usually begrudging in accepting this difference. He wants to know exactly what a poem means; he wants to reduce it to a statement, a position, a philosophy; he wants to have a correct answer so he can learn it and be secure in expecting a good grade. He prefers a world of true or false, right or wrong. He has been "educated" into this rigidity ever since he was about six. He does not come to college to learn, certainly not to face his own emotions, but to "succeed."

In order to talk about literary structure so that real dialogue may follow, the student must master a critical language. This discipline makes his fuller response possible. He must learn how to formulate ideas, how to use language denotatively as well as connotatively, for this too will become part of his equipment in seeking self-knowledge, and with it the power to communicate. Only through such power are embarrassment and fear—with all the violence that is concealed within these—overcome. Because the immediate subject should always include the student, tact, though it may be a social virtue, has no useful function in the classroom. The classroom is too holy a place for minor virtues, and so I try for frankness, I try to confront the student's fearful wish to hide from himself, and our mutual fear of judgment that makes us hide from each other. This is the atmosphere of distrust we have inherited, and it comes from replacing the pursuit of human values with the pursuit of information (leading to "success"), which in turn reduces achievement at college to grades, honors and finally to choice job offers at big corporations. The willingness to acknowledge that human values are continually in jeopardy, that studying works of the past and present must confront us personally with that danger —this is the beginning of the true bond between student and teacher. And to affirm this bond demands the exposing of one's ignorance, one's confusion, and even one's vulgarity (all things irrepressibly human)—as part of the necessary attempt to ask the ever more probing question, and hopefully to create something that is new.

A college, in order to support this open questioning, must, I believe, continue to examine its own policies and methods, and it must act as if change were good for its own sake. This is considered a heretical idea at most institutions, but the spirit of change is one with the freedom to grow, the freedom to make one's own choices and mistakes, the courage to ask questions and question answers. The very philosophy of education in this country must drastically alter if this freedom is to be won. And the result of this, I dare to dream, is that study and work would no longer be a duty but a joy.

The Faculty Recommends... books of merit

MIDDLEBURY COLLEGE

FALL 1965

VOLUME 2 NUMBER 1 • DAVID J. LITTLEFIELD, EDITOR

Europe: Diplomacy, Poetry and Fiction

GARRETT MATTINGLY, *Renaissance Diplomacy*, Penguin-Peregrine, 1964, $1.65.

The period of European history generally called or miscalled the "Renaissance" is one of the more exciting fields of investigation just now, a statement that could not have been made twenty years ago. Mattingly, who died three years ago, knew its political side as few Americans have ever done. He was one of the most respected historians and teachers at Columbia, and this book, with its crisp irony and brilliant grasp of the field, shows what a master he was.

The book is a history of how diplomacy was actually carried on at the time when the medieval idea of what an ambassador was like (an *ad hoc* envoy sent from one court to another to offer congratulations or condolences, or occasionally negotiate a treaty) turned gradually to the modern idea (a long-term resident in a foreign country, sent to collect information both above and below the table, to represent his country's interests truthfully or otherwise, and occasionally to negotiate a treaty).

To say that the change was crucial in the development of modern international relations is to flog a dead horse; Mattingly shows *how* the changes were made, and what forced them into being. Part I makes it clear that the romantic, Machiavellian idea of ambassadors skulking about dropping fibs and fomenting deep plots was practiced a good deal less than the more humdrum business of winning friends and influencing people. This seems to have been done more easily by men with a reputation for honesty. Since such a reputation was not easily won in an age when despots were neither apple-cheeked nor unduly naïve, an envoy dealt less with assorted chicanery than has sometimes been supposed.

Part II shows how modern diplomacy began to grow during the last half of the fifteenth century. This was a golden age for the Italian cities, at least until the French invaded in 1494 and thus unwittingly began modern history. Until that time the Italian towns were able to develop unmolested save by plagues, famines, plots, bankruptcies and home-grown or mercenary armies, which was obviously preferable to being overrun by the armies of the growing transalpine powers as well. It was a golden age of humanistic oratory, which sometimes led even tough-minded Italian merchants and statesmen to believe that diplomatic speeches and assorted subtleties were an effective substitute for the crudities of overwhelming military force. This was one of the mistakes for which they paid during the following century. The "Balance of Power" idea was worked out during the middle of the century, mainly in order to keep Milan in check, but also to prevent Venice, Rome, and Naples from getting too many ideas about universal sovereignty. During this stage, ambassadors helped start wars often enough, but helped end them as well. Europeans still believed in certain rules of the game in theory, however often it was necessary to abrogate them in practice.

This Golden Age came to a swift close in 1494, as the northern states began to use the policies developed by the Italian ones. France, the most aggressive power in Europe, took the place of Milan: like the latter, it had a prince who spent his revenues as he liked, and could strike hard and fast. This polarized the field of action: as Milanese power had caused earlier alliances among its frightened neighbors, so French power now did the same thing.

The entry of French and then Spanish armies puzzled the Italians. They were forced to use diplomacy in more and more tortuous ways: this is the age of Machiavelli and Cesare Borgia, the small-time hoodlum for whom his sardonic encomia have often been taken for hero-worship. The popes made it clear that the celebrated Christian Virtues were objects of distant admiration rather than close acquaintance. They did their best to maintain the old Balance of Power against steadily increasing odds; but when the Spanish Habsburgs moved into the peninsula at the same time as the Reformation took over in the north, the popes found an impossible problem on their hands.

So did the emperor. The more territory he took over, the harder the French leagued with all his growing list of enemies, including the pope and the sultan. Thus the Spanish-German-Burgundian Emperor became the backer of everything old and time-tested, and the French searched out every crevice in the cracking facade of the European political system, and pried it apart.

The rise of the new nation-states made the old medieval system impossible. Its decay was helped by the Renaissance, which in its search for classical precedents ignored the experience of the preceding twelve hundred years and increased the growing barbarity, even though the roughest aspects were masked by many a fine classical quotation. The Reformation made it worse: now the authority of popes, councils, fathers was intolerable to half of Europe, and the bloodier parts of the Old Testament became the standard authorities in books on the conduct of diplomacy and its twin brother, war. As the sixteenth century turned into the seventeenth, the dynastic power-plays, conducted by princes to whom no authority, human or divine, was allowed to be a check, finished what had been left of the medieval shell.

Thus runs Mattingly's argument. It is beautifully clear, and written with a fine irony. Parts of the book are for technical specialists: for example, the duties of ambassadors, cited from contemporary texts. But the brief asides, interspersed in almost every chapter, on what was going on in politics and its effects on diplomacy, would be hard to improve on. The last chapter ("Law among Nations") is a *tour de force*. The book can be recommended without reservation to Middlebury graduates; it has already achieved the status of a classic among historians. —PARDON E. TILLINGHAST

Professor Tillinghast is Chairman of the Department of History.

Siete poetas españoles, ed. by Carlos Sahagún, Madrid, Taurus, 1963, $1.20.

Cuatro poetas de hoy, ed. by Mª de Gracia Ifach, Madrid, Taurus, 1960, $1.20.

Poesía última, ed. by Francisco Ribes, Madrid, Taurus, 1963, $1.20.

Las tres antologías de poesía contemporánea española que presentamos hoy a nuestros ex-alumnos no ofrecen por sí solas particularidad alguna relevante, que sí adquieren si las consideramos como una totalidad, ya que juntas presentan un razonable, si bien breve, panorama de la lírica española desde las voces prestigiosas que comenzaron a dejarse oír a principios de siglo hasta las novísimas de hoy en día.

La primera, que contiene los nombres universalmente conocidos, será sin duda la más familiar, ya que en ella figuran Antonio Machado (1875), Juan Ramón Jiménez (1881), Pedro Salinas (1891), Vicente Aleixandre (1898), Federico García Lorca (1898) y Rafael Alberti (1902). El número de poemas, que pasa de 200, es más que suficiente para refrescar la memoria de quienes gustaron de esos poetas en cursos de literatura española o para dar una idea de su obra a quienes no tuvieron esa oportunidad. Digamos que a cada selección precede una brevísima nota biobibliográfico-crítica. El antologizador nos declara en el prólogo que el no haber incluído a Gerardo Diego, Dámaso Alonso y Luis Cernuda se debe más a necesidades editoriales que a olvido suyo. Como fuere, consideramos su exclusión un acierto en este tipo de edición.

La segunda es a todas luces, por necesidades editoriales, incompleta. Son sólo cuatro los poetas incluídos en ella, cuyos nombres son: José Luis Hidalgo (1919), Gabriel Celaya (1911), Blas de Otero (1916) y José Hierro (1922). Para quien conozca la poesía española contemporánea resaltará enseguida la ausencia de muchísimos otros poetas de la misma talla que los antologizados, tales como Luis Rosales, Leopoldo Panero, José Mª Valverde, Victoriano Cremer, José Mª García Nieto, Ricardo Molina y Rafael Morales, entre otros. Quien desee conocer la producción poética de las generaciones que van desde la llamada "generación del 27" (donde se detiene la antología anterior) a la presente tendrá necesariamente que recurrir a otras antologías que no sean ésta. Sin embargo, "los incluídos—como dice la autora—podrán ser conocidos más ampliamente." Sirve este libro, pues, más para ahondar en la obra de estos cuatro poetas que para abarcar el panorama de las generaciones a que pertenecen.

La tercera antología, en fin, contiene los nombres de cinco poetas jóvenes o que, como Angel González (1925), comenzaron su obra recientemente. Además del citado, el fautor de la antología incorpora a Eladio Cabañero (1930)—que asistió a un colegio sólo una semana—, Claudio Rodríguez (1934), Carlos Sahagún (1938) y José Angel Valente (1929). Como en el caso anterior, las ausencias de otros poetas se echan enseguida de ver, aunque, por no ser autores consagrados todavía, su falta es menos grave. Entre los ausentes, notemos unos pocos por si a alguien le interesara conocer los nombres: José Luis Tejada, Mariano Roldán, Angel Crespo, Antonio y Carlos Murciano, por citar sólo unos pocos. Tiene la particularidad esta antología de que, además de las noticias biobibliográficas, cada poeta escribe varias páginas sobre su respectiva poética. Algo que también la avalora es la inclusión de 21 poemas inéditos.

Viendo ahora las tres antologías en conjunto, digamos que cada una posee los defectos inherentes a trabajos de este tipo, que aquí agravan las fenicias exigencias de los editores. Las virtudes —y sólo hay que buscar éstas en una antología—son, empero, muchas: en primer lugar, la de ofrecernos 16 poetas, entre los consagrados o no, que representan casi todas las tendencias poéticas españolas en lo que va de siglo, desde la poesía de la "generación del 98" hasta la humana y social de nuestros días, pasando por la poesía pura y la cultopopular del 27; en segundo lugar, la de darnos la oportunidad de ver una poesía en desarrollo histórico; la cantidad de poemas que se insertan, que pasan de los 500, ofrece, en tercer lugar, material de lectura suficiente para sacar una idea exacta de lo que sea la poesía del siglo XX en la península, que, como es de

todos conocido, puede codearse en muchos sentidos con la del Siglo de Oro; la baratura, en fin, de estas ediciones populares hace asequible a todos un caudal literario que de otra forma sólo una minoría disfrutaría.

—Rafael Osuna

Mr. Osuna is Instructor in Spanish.

Hermann Hesse, *Demian: The Story of Emil Sinclair's Youth*, translated by Michael Roloff and Michael Lebeck, with an introduction by Thomas Mann, Harper & Row, 1965, $4.50.

Emil Sinclair, son of a prosperous burgher, lives in a childhood "realm of brilliance, clarity and cleanliness, gentle conversations, washed hands, clean clothes, and good manners." But overlapping and intersecting this world of light is a realm of "servant girls and workmen, ghost stories, rumors of scandal." And throughout the novel these worlds oppose one another, fighting for mastery, tearing Emil from the world of his parents into the world of darkness where he then yearns for the light. In school Emil is rescued from the tyranny of a bully through the intervention of Max Demian, a mystical figure, "neither masculine nor childlike, neither old nor young, but somehow a thousand years old, somehow timeless, bearing the scars of an entirely different history." "He was different . . ., he was like an animal or like a spirit or like a picture, he was different, unimaginably different."

In conversations on the Biblical story of Cain and Abel, Demian opens for Emil a new world of concepts of good and evil. But the struggle with his intense inner conflicts, arising from puberty, the awakening of sexual desire, his rebellion against philistinism, and the tension between his attraction to myths and secret cults and his awareness of impending war, drives him once again to follow the paths of darkness. Only at the time of a reunion with Demian at the university is the will to be reborn again awakened within him. Then, too, Demian's mother becomes for him the acme of motherly and womanly love: she is the mother of his ego, she is reality and symbol, reflection of his inmost self, the embodiment of eternal womanhood. The inevitable war separates the friends, but the image of Demian is now firmly established in Emil and to him it means "only to try to live in accord with the promptings which come from within the true self."

Turning inward to the self is a theme which appears repeatedly in Hesse's major works (e.g., *Siddhartha*, *Glasperlenspiel*): "Each man (has) only one genuine vocation—to find the way to himself." His task is to discover his own identity—not an arbitrary one—and to live it out wholly and resolutely within himself. Hesse is a Gnostic. Salvation must come from within, not from an outside force, not from conventional faith. To find oneself an evolution must take place in the sense of Goethe's "Stirb und werde." One must first have "tasted death and death (is) bitter, for death is birth, is fear and dread of some terrible renewal."

Begun in 1917, when the author in a state of extreme mental depression was undergoing psychoanalytical treatment from a protege of the famous Carl Jung, and published first in 1919, *Demian* is clearly influenced by Freudian and Jungian theories of psychoanalysis and the subconscious. In that it presents vividly the moral, spiritual, and psychological dilemmas of a sensitive youth growing up in war-wracked Europe and in part bases its solution to those dilemmas on views of man which have since permeated the western world, the novel has an undisputed historical and ideological interest. In that it offers—despite its sometimes murky symbolism, mysticism, and hidden meanings—a complex picture of man as master of his own destiny in a rich prose that surges, ebbs, flows and achieves its own distinctive momentum, *Demian* transcends its times and stands as at least a minor monument of European literature and a testament of man's capacity to affirm in friendship his own essential worth and dignity regardless of aggravated onslaughts by the forces of external and internal chaos.

Even though he won a Nobel Prize for *Magister Ludi* in 1946, Hermann Hesse has never been as widely read outside of Germany as he should be. This re-issue of one of his finest books, with its helpful introduction by Thomas Mann, in the very good translation by Roloff and Lebeck, should stimulate a new and generous estimate of this important twentieth-century German artist.

—Peter Berndt

Mr. Berndt is Instructor in German.

The Art of India

W. G. Archer, *The Loves of Krishna in Indian Painting and Poetry*, with 40 half-tone illustrations, Grove, 1965, $1.95.

Widespread interest in the civilization of India has encouraged the publication of a flood of books, studies of Indian art, religion, and philosophy and translations of Indian literature. Many of these, presumably addressed to the "intelligent layman," are either unreliable or uncritical, sentimental or tendentious, or in the case of love poetry passed off—for obvious economic reasons—as erotica. *The Loves of Krishna*, first published in 1957 and recently reissued in paperback, is not one of these. The author is a noted art historian, Keeper Emeritus of the Indian Section of the Victoria and Albert Museum, the

purpose of the book to recount the career of Krishna in literature and in history as a preface to romantic Indian painting. It is recommended here, however, for a broader purpose, as an introduction to Indian culture generally.

Krishna is a god, the incarnation of Vishnu, one of the three major deities of Hinduism. The three are Brahma, the creator of things human and divine; Siva, the destroyer as well as the source of vitality and asceticism; and Vishnu, the preserver and protector (these designations should be considered neither strict nor exclusive: in Hindu theology the names of the gods and their attributes are transferable among the various manifestations of the One Supreme Reality). In his role as protector and preserver Vishnu appears from time to time to rescue the earth from disaster and to guide mankind. He appears as Krishna to rescue the Yadavas, an ancient tribe of Northern India, from its demon-tyrant king and his horde of attendant demons.

Krishna is the object of intense devotion: "To adore him is the only joy." And this devotion, or love, takes many forms. Archer treats them all, showing how they hang together. It is often a matter of wonder to westerners that Indian culture expresses itself in austere and world-denying religious ideas and practices and in moving and deeply felt love literature. Yet one does not begin to understand Indian culture until he learns to appreciate this paradox. Wherever the erotic appears, the religious exists also. Consider, for example, this passage Archer cites from the *Bhagavata Purana:* Krishna, pursued by cowgirls who love him madly, and who have left husband and home to follow him, uses his divine power to provide each a semblance of himself and then bids them dance:

> The cowgirls in pairs joined hands and Krishna was in their midst. Each thought he was at her side and did not recognize him near anyone else. They put their fingers in his fingers and whirled about with rapturous delight. Krishna in their midst was like a lovely cloud surrounded by lightning. Singing, dancing, embracing and loving, they passed the hours in extremities of bliss. They took off their clothes, their ornaments and jewels and offered them to Krishna. The gods in heaven gazed on the scene, and all the goddesses longed to join. The singing mounted in the night air. The winds were stilled and the streams ceased to flow. The stars were entranced and the water of life poured down from the great moon. So the night went on—on and on—and only when six months were over did the dancers end their joy.

Yet later, when they would again give themselves to him in physical love, he admonishes them without repudiating the past. The career of Krishna is full of such paradoxes. Extravagance and the unity of opposites emerge as keys to Indian culture, and Archer, through Krishna, illustrates this well.

The art work of the book is disappointing, I regret to say. The plates are poor and the discussion of style and symbolism is tantalizingly brief. But Archer, who has written more fully of Indian art in other volumes, in this takes Krishna as figure, theme, idea and divinity and through him surveys the intellectual and institutional structures of India and reveals their inner natures.

—Victor L. Nuovo

Mr. Nuovo is Assistant Professor in Religion.

School Days, School Days

John Holt, *How Children Fail*, Pitman, 1964, $3.95.
Paul Goodman, *Compulsory Miseducation*, Horizon, 1964, $3.95.

"To a very great degree, school is a place where children learn to be stupid." This from John Holt's *How Children Fail* may be taken as his message; in any event it provides the urgency behind this account in the form of a journal of his experiences as a teacher in elementary and junior high school. He does not speak in the fashionable language of supercilious harangue, he is too hurt, too involved to do so; but what he describes leaves the reader in no doubt: school does not exist as a place of exploration and joyful inquiry. For most children, rather, school is a prison, a place of inquisition where one strives to be "right" to avoid shame, disapproval, or punishment. Such punishment is, of course, modernized, which is to say that it is psychological: "How is it possible for children of only ten to have such strongly developed concepts of themselves, and these unfavorable almost to the point of self-contempt and self-hatred?"

The child learns early that to be "right" is not the same thing as "to understand." Thus Holt says that the average child has "long since quit expecting school to make sense." And so the child develops a strategy of disengagement or even of failure ("perhaps children find, or try to find, in hopeless incompetence the kind of refuge that an alcoholic finds in liquor"). Or else the teacher and the school itself may become the enemy against which he uses his pathetic guile. In the "right-wrong situation" only the answer counts, not the child himself.

> I've corrected and scored the final math tests. The results are not quite as dismal as last week; most people did a little better. But one exception suggests that drill is not always as helpful as most people think. Caroline took the first test after being out two weeks, during which she missed much review work. She surprised me by getting 15 out of 25. Today, after taking the other test a week ago, and after a week of further review, she got only 7 right. It looks as if she learns more when she is out of school than when she is in it.
>
> Looking at the low gang, I feel angry and disgusted with

myself for having given these tests. The good students didn't need them; the poor students, during this month or more of preparation and review, had most of whatever confidence and common sense they had picked up during the year knocked right out of them. Looking at Monica today, on the edge of tears, unable to bring herself even to try most of the problems, I felt I had literally done her an injury.

. . . How can we foster a joyous, alert, whole-hearted participation in life, if we build all our schooling around the holiness of getting 'right answers'?

For anyone genuinely concerned with the plight of American education—which means to be willing to make radical changes—Holt's book should be read along with Paul Goodman's *Compulsory Miseducation*. Goodman deals primarily with the college years, but his diagnosis of our educational ills is frighteningly close to Holt's. Both see the student as forced to fit a system that does not serve or even acknowledge his real needs. Thus the possible bond between the generations ("education is love to the offspring" —Nietzsche), a bond based on trust and the desire to create things of real value, is broken, and in its place a struggle for power prevails whereby the tortured seeks to become the torturer. Possessions, security, or position usurp the natural goals of immediate bodily delight and the pleasures of imaginative effort. This is how Goodman outlines what he calls a "usual case:"

So our student is taking five or even six subjects, when the maximum should be three. Whenever he begins to be interested in a subject, he is interrupted by other chores. Rushed, he gives token performances, which he has learned to fake. No attention is paid to what suits *him*. The only time a student is treated as a person is when he breaks down and is referred to Guidance.

In place of reliance on intrinsic motives, respect for individuality, leisurely exploration, there is a stepped-up pressure of extrinsic motivations, fear and bribery. The student cannot help worrying about his father's money, the fantastic tuition and other fees that will go down the drain if he flunks out; and he must certainly keep his scholarship. On the other hand, the talent scouts of big corporations hover around with lavish offers. In this atmosphere are supposed to occur disinterested scrutiny of the nature of things, the joy of discovery, moments of creativity, the finding of identity and vocation. It is sickening to watch.

From my own experience of ten years of teaching college, I have come to believe that the hardest moral choice a student must face is whether to avoid working in an uninteresting course in order to use his time and talent more honestly, more fruitfully. Few students can make that choice and survive in college as it now exists. The alternative is hypocrisy, which breeds contempt for the school system and poisons the student's attitude toward himself and any belief in the possible integrity and satisfaction of work.

We act as if giving grades, separating emotion and intellect in our response to students, were facts of nature and unalterable. And when we go about modifying the system humbly and respectfully, we are simply feeding the monster when it should be slain. That alone is the *practical* thing to do if it is human values we care about. Since no two students work in the same way or at the same speed, there must be leeway for the individual to discover the natural rhythms at which he works best or else he will become merely another bored, mechanical assignment-doer. He must be free to experiment with himself, with his mind. The student must be free to pursue his interests *as they inspire him*. That is what freedom means: the harmony of impulse and action. Excitement should not be regulated, thwarted, or postponed. No motive is more precious than natural interest, passion from within, and no effort is too great to protect and sustain that passion, for nothing else can sustain true intellectual growth.

—Robert Pack

Mr. Pack is Assistant Professor of English and a well-known poet.

Society—The Abstract Sciences

John G. Kemeny, *Random Essays on Mathematics, Education and Computers*, Prentice-Hall, 1964, $4.95.

Random is haphazard, by chance, without pattern or design. In that they were prepared at different times for different occasions, as addresses before various groups or as articles for magazines and journals, these essays are random. Yet, as Professor Kemeny says in his preface, "a number of shots fired at random may form an interesting pattern on the target." Chairman of the Mathematics Department at Dartmouth, recipient of an honorary Doctor of Science from Middlebury at this last June's commencement, Professor Kemeny is a leader in the mathematical community and a most articulate spokesman for it and the teaching profession.

Mathematics, education, and computers are "three of the significant forces influencing our civilization." Professor Kemeny examines these forces with perception and proposes imaginative solutions to some of the problems that arise from their impact on our civilization. Though the problems are serious, the presentation is witty and is illumined with example and anecdote.

The essays have several recurring themes. One in the section on mathematics is the lamentable lack of knowledge of even the educated person concerning things mathematical. The all too common attitude of the intellectual is decried: "He will be careful to profess knowledge and appreciation of literature, art, music, and other phases of the accepted culture, but he will boast of his ignorance of mathematics."

These essays can serve as a first step toward dispelling such ignorance. Although the reader will not learn much mathematics *per se*, he will gain insight into the role it plays in our civilization and will acquire some feeling for its nature and character, as in the description of applications of mathematics to the social sciences, fields in which whole new areas are now being developed mathematically. Occasionally there is a direct statement, such as, "Our modern view of mathematics is that it is precise, systematic, abstract reasoning, and all abstract reasoning that is sufficiently precise and systematic constitutes mathematics." In this section also are pleas to recognize and foster mathematical talent from the earliest years, lest the needs of the future not be met. The principal recommendation is to encourage boys and girls with this talent through ability groupings and honor sections. Better students are bored with the pace of a class determined by those with average, or below average, mathematical ability.

Throughout the book, as Kemeny identifies an area of concern, he also suggests an imaginative and often strikingly original solution. This is particularly true in the section on education. He outlines in detail educational programs for both secondary school and college, programs sharply different from those currently in force. There is, for example, a plan for college admissions designed to create a "well-rounded college" rather than one filled with the "well-rounded man." And the faculty member pressured by the administration to do research and distracted by the government to advise on the spending of federal funds has an advocate for a return to the classroom and the teaching of students.

Finally, the present capacities and potential possibilities of the electronic computer are explored, as glimpses are given of the revolutionary changes these machines are bringing to our society. The simulation on the computer of situations in business, traffic flow, even in war games, already makes possible the testing in hours of alternatives that in real life could be explored only in months or years of actual experience. For the future a National Research Library is proposed, with books and articles miniaturized on tapes and made accessible through projection units and computer control. Thus might be solved in 2000 A.D. what will otherwise be insurmountable problems of information storage and retrieval.

The essays are stimulating and provocative. Still, addresses and articles prepared over a number of years inevitably suffer somewhat with the passing of time. Surely a "Mathematical Missionary" would have less discouraging experiences in 1965 than in 1957. Furthermore, some treat specialized themes and will have greater appeal to those directly concerned with the topics considered. For us at Middlebury, as we now plan for the acquisition of a computer of our own, the final essay on the place of a computer in a liberal arts college is of more than passing interest. Any reader, however, will come away from these essays with a deepened appreciation and understanding of these three forces affecting our society and with a sense of excitement generated by seeing original solutions proposed to the problems which these forces create.

—Donald H. Ballou

Mr. Ballou is Beman Professor of Mathematics and Chairman of the Debartment.

P. T. Matthews, *Introduction to Quantum Mechanics*, McGraw-Hill, 1963. $5.00.

Quantum Mechanics is no longer a revolutionary member of the Physical Society. It has long been warmly received as an amiable trouble-shooter in the scientific community. Today one can hardly attack a problem in physics without a working knowledge of it. For this reason quantum mechanical concepts should be introduced at the earliest possible stage to students of science, and because they are pertinent to the work of a variety of disciplines, they ought to be lucidly accessible to other students and scholars too. Until recently there has been no book which adequately met the needs of such readers. Those available were either descriptive with very little mathematics or so detailed as to exclude all except an advanced mathematician. Matthews' *Introduction to Quantum Mechanics* will close this gap. As the author announces in the preface, the reader is never assumed to know how to do anything more complicated than differentiate the product of two functions. His treatment of the subject matter represents a downward quantum jump in difficulty without unduly sacrificing mathematical rigor.

The book is divided into four parts: (I) Basic Formulation, (II) Atomic Physics, (III) Nuclear Physics, and (IV) General Theory. After dealing lightly with general principles, the author gets quickly to the heart of the matter by giving applications to atomic and nuclear systems and then returns to expound the general theory a little deeper. His style of writing is lucid and readable.

The so-called Gaussian units are used throughout the book instead of the rationalized MKSA (or MKSC) system of units. This will not cause great inconvenience to those readers whose familiarity is limited to the latter system.

Dirac's bra and ket vectors are employed and stressed. This scheme greatly simplifies the mathematical structure of the theory without crowding an equation with unnecessary information. It is particularly convenient in dealing with invariance properties and conjugation relations. Furthermore, with the aid of the fundamental properties of Hilbert space and commutation relations, the matrix elements (and, in particular, the expectation values) of an observable can be readily obtained by means of orthonormal kets without actually performing tedious integration. In this regard, the advantage really lies in the fact that it is not necessary to refer to any particular representation.

The book has some shortcomings. Several important topics are omitted, notably Perturbation Theory and other approximation methods. Computations are mostly carried to only one or two significant figures. Partial differential operators are used in cases where only one variable is involved. There are some errors and misprints which are unavoidable in a first edition, but these are minor flaws in an otherwise excellent book.

—Chung-Ying Chih

Mr. Chih is Associate Professor of Physics.

Mystery Without An Answer

Milton K. Munitz, *The Mystery of Existence*, Appleton-Century-Crofts, 1965, $5.00.

Why is there something rather than nothing? Why is there a world at all? Why did the world begin when it did? These and similar questions have had a peculiar career. For centuries they were regarded as central philosophical and theological problems. Then, under the constant assaults of logical positivists and linguistic analysts, they were declared meaningless and insignificant. Such questions, it was suggested, were the result of confused usage of language. Recently some existentialists, notably Martin Heidegger, Gabriel Marcel, and Paul Tillich, have tried to reestablish their philosophical worth. Milton Munitz's extensive essay on philosophical cosmology, an attempt to reappraise the significance of these questions and to expound possible answers, is a further effort in this direction.

Munitz regards at least the basic question—"Why does the world exist?"—as meaningful and properly framed. We know a great many things *in* the world through sense perception, but the cognition of existence as a trait *of* the world, he argues, "is not given to us by a mode of sensory observation," nor is it "the outcome of a process of reflection or inference." Rather, existence "is established for us in experience, in a sufficiently broad use of the term." It cannot be argued or compared to any other type of experience, it is primary, irreducible. "What then does the world do? Well, the world does what it does. It cannot be assimilated or literally compared to anything else." Similarly, the reason for the existence of the world is also unique and, in a sense, unknowable, for were we able to formulate and apprehend it, we would find it "so distinctive that it would not be assimilated to any other type of reason known to us." This, finally, is what constitutes "the mystery of existence."

Because Munitz rejects common sense, science, religious experience, and analytical reasoning as modes of inquiry into the reason for the existence of the world, his position is one of philosophical agnosticism. Although such a conclusion may appear anticlimactic, it in no way limits the unusual illumination that proceeds from his analysis of such basic terms as "world," "existence," "nothing," and "reason," of the status of models in scientific explanations, of the traditional arguments for the existence of God, and of many others. *The Mystery of Existence* is an indispensable prolegomenon to any modern philosophical and theological discussion about the nature of the world.

—Visvaldis V. Klive

Mr. Klive is Assistant Professor of Philosophy.

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BRUCE B. PETERSON

(*Continued from page 9*)

discipline. Freshmen tend to receive heavy doses of content; seniors are expected to concentrate on method and perhaps absorb some form. Moreover, the emphasis must change with the character of the student body, and, most important of all, with changes within the discipline. These remarks are framed in terms of mathematics, but they should be valid, with the necessary changes in emphasis, for any other field.

We dismiss the teaching of pure content—learning formulas, memorizing theorems. Emphasis on method is usually the proper path of undergraduate education, but it can be dangerous. In mathematics this emphasis can produce what we might call a cult of logic, in which logic is worshipped as the major tool of mathematics. Logic is, of course, important, but total dependence upon it robs one of intuition and the free-wheeling habits of mind which produce most of the truly worthwhile contributions to mathematics. Logic is the tool of those who read mathematics books, but those who *do* mathematics need much more.

Perhaps, then, we should emphasize form, the component, which, when finally discovered, makes scholarship fascinating. We can do this very simply by presenting the students with certain gems from the field which, for sheer brilliance in content and method, are breathtaking. These gems, however, may turn the student's awe into an intellectual dalliance in the discipline. But we are trying to produce an attitude toward mathematics which will lead, not merely to delight in the occasional brilliant insight, but eagerly to the very hard work which is scholarship. We must make clear that the higher stature of form leads only to greater effort in method, which in turn requires and produces increased effort in content.

The student, at this point in his education, has embarked on a quite proper quest for independence. He is stalled in this quest by his colleagues from other fields, whose enthusisasms for their own fields blind them to the delights of mathematics. He is frustrated by his mathematical colleagues, who may not yet have joined in his quest. He may be weighed down with content by the very professors who are trying to help him on his way. At the other extreme, total independence may lead him to the dilettantism we feared above.

We must surely not allow the free spirit to be stifled, but it is equally important that we not allow it to produce a hollow shell of scholarship.

NORMAN B. SCHWARTZ

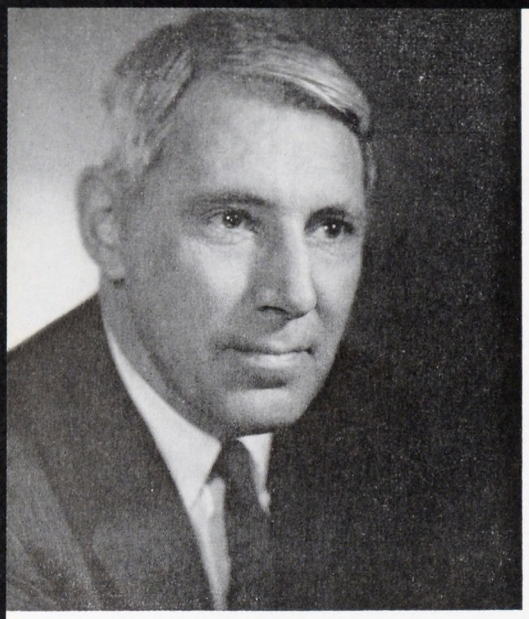
(*Continued from page 9*)

right and inevitable; à la Sapir, just as fish do not know they live in water, so most groups of men do not know that they live in a culturally structured world. We are all alike and all very human in denying the man-made part of our traditions. Apparently our security is rooted in the learned experience that our traditions are "natural," not man-made. This is a deception, but without it life becomes difficult, even unbearable. Any threat to this experience of naturalness can arouse anxieties, for men build their lives about the belief that their particular world is the only real one and the only right one. The problems of teaching anthropology are grounded in this emotionally valued, adaptive deception.

The student has to cope with the phenomena of cultural diversity, with the fact that other people have worked out other, equally valued traditions by which to live, and with the fact that this variation is rooted in a common humanity, that it occurs because men are basically alike. It is precisely this which is threatening. A study of human differences at the individual or group level strikes at one source of our security—the belief that our world is *the* world. In the classroom there seem to be at least four responses to these problems. (a) The student may judge others by his own standards and find them inferior. It's emotionally easier to study "inferior" peoples and to avoid the implications of such a study for our own lives. Probably this is why many students prefer hearing about primitive societies rather than about themselves. This is the moral equivalent of racism. It is a denial that other races, that "inferior" peoples are but a different version of ourselves. (b) The student, and unfortunately all too often the teacher, may retreat into a facile cultural relativism which the student may use as an excuse to duck moral issues and which the teacher may use to maintain the fiction that his is a value-free discipline. (c) The student may reduce the profound diversity of cultures to trivial differences, although, I believe, this most of all denies our common humanity. This evasion has the virtue of denying the value of any potentially embarrassing examination. (d) The student also may try honestly to come to grips with one aspect of the human condition, with human diversity. The study may broaden his outlook about the range of possible and meaningful alternatives to men's problems. It may also throw him back on a more critical and therefore more dangerous study of his own traditions. It is not altogether pleasant to discover that all traditions are primitive to some degree.

The uncomfortable, even threatening thing is that we cannot honestly study other cultures without coming around to emotional and intellectual self-examination. The open study of cultural diversity is a study of our own preconceptions, fears and strengths. Learning about ourselves and about others occurs together if it occurs at all, and it is the very nature of culture which makes such learning emotionally difficult. Each culture seems to have its own characteristic defense mechanisms for avoiding different forms of self-examination. If student and teacher can find a way to discuss the role of culture in their lives, a way which gets around fear and embarrassment by directly confronting them, then the discussion itself may add a dimension to their own experience, their own culture.

As the overt differences between nations and cultures become leveled through such processes as urbanization and industrialization, we may miss the chance to appreciate newer, more subtle diversities unless we learn to cope intellectually and emotionally with those that already are vanishing.



The Responsible Voice

Dr. James I. Armstrong
President of Middlebury College

Four hundred and twelve members of the Class of 1969 attended the Freshman Convocation and were addressed by Dr. Armstrong. This text contains the substance of the President's talk to the freshmen entering the College from 34 states and 5 foreign countries.

It is our custom at Middlebury College to begin the year with Freshman Convocation. This gives me a chance on behalf of the College to welcome you officially and personally, and I do now so welcome you *warmly* with the hope that has never failed to leap up upon these occasions from year to year—with the hope that each of you will catch the spirit and power of liberal learning and will carry it with you all the days of your life—

"To sail beyond the sunset and the
baths of all the western stars."

This morning, then, I am talking primarily to the *graduating* Class of 1969. Notice I say graduating class, thereby indicating our confidence in you, and that ought to make you feel better. Your admission to Middlebury means that by all the litmus paper which we have devised you show the color of the bachelor's degree in your qualifications. You have already begun your work here—choice of courses, proficiency tests, discussions with your advisor, but symbolically the beginning was at the moment when you joined the faculty in procession. You now proceed together, both in pursuit of knowledge, both learners. Each of you has become a part of a community of scholars and to this community each of you has an important responsibility.

But first, if I could allay by a word any misgivings or uncertainties which you have, perhaps an uneasiness or loneliness, I would say the word as would the Deans or your advisor. It may help you to know that we are not unaware of these misgivings, and we know that they can only be allayed by you as you grow in confidence, as you put to work those talents which your records tell us you have. The strangeness of your new surroundings will very soon disappear; we hope you won't disappear with it into too comfortable ways, but will strike out with all the energy which is so obviously present. Follow the trend of your own mind, but be sure you have taken off any narrow blinders which you may have bound on prior to your arrival. Lift up your heads; don't just look, try to see with a restless, penetrating curiosity.

You *will* soon adapt to the College. Then you will want to change the College, and that is good. The other components of the College will listen. Like the United States we have our channels of communication, representation; we are a community of scholars and in certain ways a democracy (a limited one, to be sure, but one in which your voices will count when they are responsible expressing firmly held convictions). Indeed, such voices will be a propelling ingredient of the whole College. But before you take my words to be an invitation to change "carte blanche," I think the other components of the College (especially the Deans) would like me to set some sort of context within which you will understand my meaning.

You should first know what a college really is—at least how it is conceived at Middlebury. If you are tempted soon to think that the old guard is so entrenched that change will never be possible, you should know that the college is ever-changing, but tries to hold a steady course.

Perhaps as newly admitted freshmen you will appreciate an historical example of change in admission standards and student rules-of-conduct at a neighboring women's college. I refer to a time a mere 80 years ago.

1. No young lady shall be admitted who cannot kindle a fire, wash potatoes, repeat the multiplication table and at least two thirds of the shorter catechism.

2. Every candidate for admission shall be provided with a pair of rubber boots, one pair of cowhide shoes, a copy of Todd's Student Manual, one orthodox bonnet, subdued hoops, and a clothesline.

3. No member of the school shall devote more than *one* hour a week to miscellaneous reading. The *Atlantic Monthly*, Shakespeare, *Robinson Crusoe* and other immoral books are forbidden. The *Boston Recorder*, *Missionary Herald* and Washington's "Farewell Address" are recommended for light reading.

4. No member of the school is expected to have any male acquaintances unless they be returned missionaries or agents of some benevolent society.

5. No young lady shall at any time write compositions except on the following subjects: Friendship, Hope, Flowers, Beauties of Nature and Benevolence. Those, designing to be old maids, may add that of Love.

6. No young lady shall stand before the mirror more than three consecutive minutes.

Eighty years is not so very long ago as an historian sees, and every man is his own historian; so you may set your mind at rest. Changes can be and are made.

Let me turn for a few moments to a preliminary examination of the role of a college. Conventionally we are wont to say that a college exists to diffuse knowledge (not, by the way, information but *knowledge*), and this is, of course, its primary function, but how it proceeds and what kind of a spirit of learning may be present can condition, even determine, to a very large extent the success of the college in performing its primary function, of realizing in Aristotelian terms, the actuality of its potentiality, of reaching its final form—its telos.

It is commonplace to say that the purpose of a college or university is to communicate and advance knowledge. Let me see if we can take a Greek pre-Socratic idea that reality lies in the tension of opposites and apply this to the world of learning of which Middlebury and you are a part.

I see the process of *learning* at college to be essentially one of a tension between two major aspects of learning. The first is historical—a *custodianship*, a guardianship of the past experience of men and the formulation of that experience in art and science; it is conservative both in the sense of conserving, recording, storing, and in the sense of valuing what has been learned in the past for it partakes of the truth, and the truth is in Eliot's words "the still point in the turning wheel." In colleges and universities throughout the world there is this common mission—to conserve the record of the past and the ancient and honorable goals of liberal learning—of the freeing of men from contemporaneity, from the limitations of the particular moment of time, of freeing men to follow the evidence wherever it leads without constraint, without fear of the consequences of knowing and learning. The truth finally needs no shield; it does need a home among men.

What has been good and what has been bad are made available to the learner, and perhaps at no time in the past has there been a greater need to hold steadily to this role of custodianship in institutions of learning.

I am brought next to the second major aspect of learning which a college fosters, and it is itself inherent in the values which I have just said the college conserves and guards. This is the freedom of thought, independence of mind, which produces fresh thought, sometimes discovery, sometimes the revolutionary. This spirit belongs in a college and will be nurtured by the faculty. How else can it be—the tension between opposites wherein so often lies the balance of truth, the conservative and the revolutionary yoked together. For in the spirit of free inquiry there can be no stifling of competent discourse and dissent whether formal or informal. The image of yoking reminds me of the Platonic myth of soul—a charioteer and two powerful horses yoked together. If the charioteer keeps the two horses in balance, pulling together, the soul thrives and mounts from earthly to heavenly vision.

If then this tension be rightly understood, there can be, indeed there will be, a productive, provocative interchange. I had almost said "protest," the alliteration is so attractive and the word "protest" in vogue, but I prefer to see the way of the liberal arts as one of discourse, hence "interchange" among the various components of the college, especially among the students themselves and between the students and the faculty/administration.

In these days when very large numbers of young men and women are taking advanced work (in 1900 only about 4%, in 1965, 40%), the encouragement of the revolutionary on a campus sounds like madness. Witness the events of last year on a number of university campuses. Clearly I am not sponsoring any such activity, for those events it seems to me are startling and sobering evidence of the failure to understand the nature of a college or a university—this present which ought not to disregard the past—and beyond that a breakdown in communications. At Middlebury the channels of communication exist and are open. Knock and you will find, perhaps not the answer you want, but at least a reasoned answer. It is the hallmark of the educated man or woman that he be capable of dispassionate (*Please turn to page 26*)

Highlights of the talks on "Science at Middlebury" that drew large alumni audience at fall Homecoming

OUR NEEDS FOR FACULTY AND FACILITIES IN THE NATURAL SCIENCES

By Dr. Thomas H. Reynolds, *Dean of the College*

Over the past decade I have been asked on several occasions to occupy this chair at one or another of the alumni seminars given in conjunction with Homecoming Weekend in the fall. In all previous instances, we have discussed some important question of current interest in the world. Thus, I have stood here discussing American foreign policy, our activities in Africa, our activities in Vietnam and a number of other similar topics. It is, I think, interesting and significant to note that tonight we are gathered together to discuss what is happening at Middlebury and only part of what is happening at Middlebury at that. This seems appropriate because for many of you this has become an exciting and dynamic part of what's going on in at least a certain portion of the world we live in.

What's going on at Middlebury today, of course, is not happening in a vacuum nor did it suddenly happen nor did it completely happen with the advent of a new president. Your college for many years has steadily been building itself, forming its traditions, training its young men and women, gathering its faculty until, like other institutions before it, it has reached that time in its institutional life when many of these things seem about to reach their full fruition.

Thus, Middlebury has always had learned faculty members, intelligent students, and a name for herself and her sons and daughters in educational circles. Today, however, it would seem that Middlebury is moving ahead in the area of the small, liberal arts college of high national standing. This is, perhaps, the most difficult sort of college to be and we may well be proud of the strong thrust in this direction which the college is making.

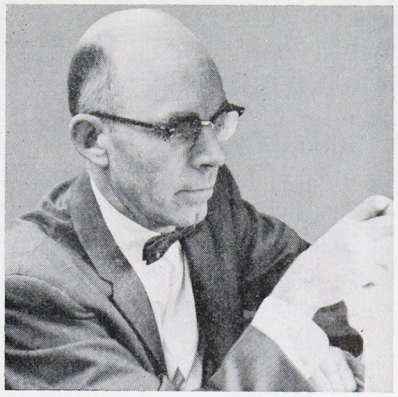
This accomplishment is not easy, however, and I'm here tonight to discuss at least one aspect of this growth. During President Armstrong's first year in office, an evaluation of the entire college situation was made in connection with an application for a Ford Foundation Grant in Ford's final challenge grant program. As a result of the intensive self-evaluation necessitated by this application, four major areas of need rapidly emerged.

Though I speak of four areas of need, in fact, I should speak more accurately of one great area of need and three subdivisions of that need. The first, of course, is the continuing need for the creation and maintenance, indeed, sustenance of a fine faculty. Middlebury has, indeed, been fortunate in the quality of individual members of its faculty. It has not, however, perhaps reached out in numbers and in depth to recruit and keep a faculty in all of its departments indicative of the best scholarship in the nation. This is, now, our goal. Good colleges are good faculties and we can afford to leave no stone unturned in the rigorous promotion and development of this aspect of college life. Indeed, so important is this portion of our need that it seems almost to dwarf the material needs which make up the other three areas of need of the College. These are an arts and music center; a science center; and a residential complex sufficient to meet the needs of a student body expanded in size by almost one-third.

It is my purpose tonight to speak of the first and third of these needs; that is to say, our faculty needs and more particularly, our needs in the natural sciences. As you will see, these needs for facilities are not unconnected; indeed, so closely are they related, they are almost one and the same thing. For example, it is obvious that we will not be able to recruit in the area of the natural sciences a faculty equal to any in the nation without the necessary equipment and facilities both to foster fine teaching at Middlebury and to enhance the future research of faculty members and students alike.

Recognizing these necessities, President Armstrong asked Professor Grant Harnest, Chairman of the Department of Chemistry, to chair a sub-committee of the College's new, Long Range Planning Committee charged specifically with the task of evaluating our physical needs in the Natural Sciences. This sub-committee was to have a (*Please turn to page 24*)

PROGRAM CALLS FOR EXPANSION OF PHYSICAL FACILITIES FOR SCIENCES



By Dr. Grant H. Harnest, *Chairman of the Chemistry Department and Planning Committee*

As some of you may know, the Culture Conference at Middlebury two years ago investigated the problem of "Man-made Man"—with special attention to how science and scientists may be shaping the future of man and his world; or should I say universe? One of the members of the panel, Dr. Chargaff, biochemist from Columbia, chose to discuss recent research on genes, those elements in the reproductive cells which are responsible for hereditary characteristics. This research suggests that the desoxynucleic acids and ribonucleic acids which are present in all cells, including the genes, are the key elements in determining heredity. These substances in shorthand reference are known as DNA and RNA. His discussion was one of the best demonstrations at the conference of man being on the threshold of shaping his future destiny. Dr. Chargaff pointed out that if our current hypotheses are correct we may eventually have the power to change man physically and perhaps mentally. Further he explained it is just possible that even minor changes in the DNA and RNA molecules in the genes could change man's characteristics drastically. Serious philosophical implications are immediately apparent.

Last spring the University of Vermont held a three day conference called "Genesis Revisited." The theme was similar to ours of the year before. One of the participants, Dr. Paul Weiss, Professor of Philosophy at Yale, suggested that although man cannot create man, scientists may sometime possess the capability of creating a being which would look and act human. He then raised the question, "Should we make such a creature?" If the answer to that is affirmative then we ask: "Do we own him? Can we unmake him—can we destroy him? How do we fit him into an on-going society?" These problems certainly do not have easy answers and perhaps no answer at all. Without going into these problems I think most of us might agree that it is of crucial importance that the tremendous explosion in scientific knowledge be used with utmost wisdom. The scientist who has a sense of the dignity of man and of human values should certainly be in a better position to use his special knowledge with wisdom, than if he knows only that a particular arrangement of molecules in DNA and RNA determine whether you have blue eyes or brown eyes and wonders if an interchange of a molecule of guanine with adenine could produce offspring with red eyes from blue-eyed parents.

I believe that I am safe in saying that your science faculty at Middlebury is convinced that there is far greater opportunity to prepare the embryo scientist for his role in society at a small liberal arts college than in the technical university. Because we do believe this so strongly, we have cast our lots with the liberal arts college, committed to excellence in teaching.

What has this to do with science facilities at Middlebury?—a very great deal. It is today's talented science student who will be inventing the lasers of tomorrow and deciding whether to exchange the positions of guanine and adenine in DNA. To attract the really talented science student to Middlebury, we must provide both the very best faculty and the very best physical facilities that our resources will allow.

As those of you who are recent graduates know, there is a critical need at Middlebury to provide modern tools and new physical facilities in the Natural Sciences if we are to meet our responsibility of providing excellence in the education of present and future generations of young men and women in the true liberal arts tradition. Even more urgent is the need to strengthen and expand our faculty. The finest science facility in the country is but a pile of stone until the hand and mind of the gifted teacher gives it life.

It was in this spirit that President Armstrong asked the departments in the Division of Natural Sciences to embark upon a vigorous planning program for the future. When he asked Thomas H. Reynolds, Dean of the College, to assume (*Please turn to page 25*)

member on it from each of the departments of the natural sciences. To begin with, Professor Harnest traveled extensively in the summer of 1964 visiting a number of institutions which had erected new science facilities. On his return in the fall, planning in the Science Facilities' Planning Committee (the subcommittee) moved forward apace.

In my new capacity as Dean of the College, the President asked me to work closely with that committee and I received my first contact and, I may say, also, my first enthusiasm for work in developing the natural sciences at Middlebury. It soon became apparent, both to the members of the committee and to myself, that our needs were very great. Though we have produced some outstanding scientists in the last two decades and though the number of undergraduates and graduate students who have done their work at Middlebury have among them a high incidence of people going on to more advanced degrees, we have been doing this with a minimum of human and physical resources. Indeed, it is a tribute to those who have worked in our laboratories and in our science halls, that we have maintained ourselves so well in this field.

There are various ways of describing our need. Perhaps one of them lies in the following example. As students have come to Middlebury in recent years and have been affected by the ever-increasing competition among all students to get into good colleges, the apparent academic level of our students has steadily risen by almost any objective criteria which one can think of. As this has happened, there has been a tendency, recognized by several of our department chairmen, for good Middlebury students to major in non-science fields. At least one of our department chairmen attributes this to the fact that at the level at which we are now procuring students, those who are of a scientific bent can and are going to institutions like Cal Tech, MIT, and other first class technical colleges and universities. If this is the case, then we at Middlebury have the choice between concentrating on languages and humanities, and abdicating any position in the natural sciences and with it our position as a liberal arts institution, or bringing the level of our work in the natural sciences up to that of the very best in the nation.

It might be argued that to attempt the latter course is foolhardy and expensive. I think, however, after a moment's reflection that you will agree with me that we have no other course. The liberal arts, in this country and elsewhere, have always meant the liberal arts *and* the liberal sciences. Indeed, in the history of ideas, knowledge of a scientific nature, empirical knowledge, if you will, has been very close to the center of man's great store of knowledge from classical times to the present. Knowledge is not knowledge without scientific knowledge and a liberal arts college would not be worth the name unless it contained real work in the natural sciences.

In a college of our quality, this kind of work cannot be simply "dubbed" in; we must have the real thing or we cannot have it at all and if we are to have the real thing, we must have the faculty in depth to do the job and if we are to have the faculty, we must have the resources to do the job. This is what we are about in our plan for the natural sciences at Middlebury.

I'm not here tonight to tell you of the details of that series of buildings and what will go on in them. Professor Harnest will tell you much of that and Dr. Fred Stone has left a busy office in Washington to tell you something of what is going on in other small colleges throughout the nation, something which may substantiate that which I have said to you tonight about the necessity for our moving in the direction of a center of excellence in the natural sciences.

To get back to our story, however, at Middlebury, one of the first tasks which faced the planning group in the natural sciences was the development and elucidation of a set of goals. Out of many hours of discussion, these goals gradually emerged. First, that Middlebury should continue to recruit faculty who are interested in teaching and who were challenged, in particular, by the problems involved in teaching undergraduates. Second, that a system must be devised to permit such a faculty the time and the facilities to engage in searching for the answers to some of the questions which lay on the frontiers of their special disciplines and by so doing to engage and interest their students in the life of the research scientist. Three, a program must be brought into being which would stimulate students to creative effort through a maximum use of independent, individual work. And finally, that the obvious interplay between the major disciplines in the natural sciences today seemed to indicate the desirability of creating a system which would serve through the years to minimize the boundaries between the various natural sciences and encourage interdepartmental work where appropriate. Slowly there emerged in the minds of some of us, the concept of a new *center* at Middlebury in which all the natural sciences might participate. This idea was taken up by the committee and by fall of 1964 had been accepted as a planning goal.

Now, for the moment, I must stop briefly and backtrack to a day almost two years ago when President Armstrong asked the firm of Sasaki-Walker of Boston to join with several members of his staff in appraising the general facilities of the whole college with a view to side planning for the future. (*Continued on page 26*)

administrative direction of this activity under the Committee*, his charge was to "plan boldly, plan with imagination and plan for change." It is my pleasure to report that the Science Facilities Planning Committee, with representation* from each of the Natural Science Departments, met the challenge with endless hours of discussion and formidable quantities of homework, analyzing needs and preparing realistic projections for future goals. In all of this work Dean Reynolds has given us his time, advice, assistance and above all steady encouragement far beyond the call of duty. He has become so enthusiastic about our crusade that he is one of our most ardent spokesmen, notably demonstrated in his skillful preparation of proposals for foundation support, a most arduous task fraught with frustration. Vice President Walter E. Brooker and Mr. Carroll Rikert, College Treasurer, have been equally enthusiastic and cooperative in planning for excellence in the sciences. This joint faculty-administration effort has culminated in the plan, human and physical for development of an authentic Science Center. Our work is far from complete but the goals, as outlined by Dean Reynolds in the preceding pages, are clear.

It was early in our discussions that the Center concept developed. It was a logical evolution because the crumbling of walls between the various science departments has become a firmly established trend in recent years. Hybridization of basic science areas is readily apparent in the nomenclature of certain disciplines, Biochemistry, Biophysics, Physical Chemistry, Geophysics, less discernible but still implied in the titles, Microbiology, Oceanography, and Environmental Studies. An essential ingredient then was to plan physical facilities which would promote cross-fertilization of ideas between faculty and students in different fields. Yet retention of departmental autonomy also seemed to be indispensable. There are a number of reasons for this:

1. Professional pride and the opportunities for growth provided by association with organizations like the American Chemical Society.
2. Recognizable specialization—a necessity today when the explosion in scientific knowledge makes it impossible for any single individual to be fully or even well informed in all of the sciences.
3. Perhaps most important of all the smaller departmental unit encourages development of an esprit de corps that is invaluable.

These two opposing ideas—center versus autonomy—presented a real problem to both the Committee and our architects, The Architects Collaborative in Cambridge. After many meetings and countless hours of individual effort by all concerned a solution has begun to emerge.

Before considering whether one or several structures might best serve our requirements, the architects needed to know where the facility would be located. As Dean Reynolds indicated in his analysis of this problem there are compelling reasons to locate the new construction in proximity to Warner Science on what is now Storrs Avenue.

When Mr. Harkness, the partner in Architects Collaborative who is designing our Science Center, demonstrated the building mass involved in a single envelope containing 150,000—200,000 square feet, it was quickly ruled out as being incompatible with existing buildings on the lower campus. Present thinking leans towards a center composed of three major elements—two new structures plus Warner Science all in close proximity. Tentative plans also call for the Departments of Physics and Chemistry to be housed in one of the new elements, the Departments of Biology and Mathematics in the other and the Department of Geography and Geology in Warner Science which is to be completely renovated to serve the needs of this department. In the case of the two new buildings there will be direct ground level linkage containing shared facilities such as radiation, cryogenics, sonics and x-ray laboratories, stockrooms, shops and some classrooms. All three elements will be united at ground level through common court areas and landscaping to communicate in physical terms that this is a center. A fourth element containing such shared facilities as a computer center, science reference materials and learned journals, faculty and student lounges, Science Division administrative offices and communications center which could serve as a focal point for the complex is most appealing but there are difficulties in designing a separate core unit which will embrace the ready access desired by the constituent departments. This is one of the major problems currently under investigation by our architects. Mr. Harkness and his colleagues have found solutions to other difficult questions so we are confident that this too will be resolved.

Departmental identity referred to earlier as a requisite feature of the center (*Continued on page 27*)

*Associate Professor Brewster Baldwin, Department of Geography and Geology; Professor Donald H. Ballou, Chairman, Department of Mathematics; Professor John G. Bowker, Chairman, Natural Science Division and Dean of the Faculty; Professor Grant H. Harnest, Chairman, Department of Chemistry and Chairman of this Committee; Professor Harold B. Hitchcock, Chairman, Department of Biology (Associate Professor Howard E. Woodin represented the Department of Biology last year while Professor Hitchcock was on leave of absence); Professor J. Rowland Illick, Chairman, Department of Geography and Geology; Associate Professor Walter A. Moyer, Department of Chemistry and Secretary of this Committee; Professor Benjamin F. Wissler, Chairman, Department of Physics.

WILLIAM B. CATTON

(*Continued from page 10*)

composing the human record are far from complete and often unreliable, hence that no total or final reconstruction of the past is possible. He will learn that historical interpretation is always changing, since no two individuals or generations or societies will read identical "lessons" from evidence that is inherently ambiguous.

And from all of this, hopefully, he will develop certain habits of thought. He will recognize that history contains no "truth" that is not continually open to argument or revision. He will come to appreciate the infinite complexity of human motivation and human events and the partial and subjective nature of our knowledge about the past. He will tend to distrust dogmatic assertions, sweeping value judgments, panaceas, or easy black-and-white descriptions. History will, in short, suggest the value of moderation, restraint, caution, balanced judgment. It will deny the existence of final answers or the achievement of Absolute Truth, although it will add that better answers are always possible and that truth can always be approached more closely. In an explosively complex and changing world, this awareness and these qualities may substantially enlarge the prospect of human survival, perhaps even the possibility of human triumph.

THE RESPONSIBLE VOICE

(*Continued from page 21*)

thought and respond to reason.

We start here at Middlebury with the assumption that students *are* responsible and can at the most crucial point in the life of the College accept responsibility for their own intellectual integrity. I know you have heard from your fellow students on this matter. I shall only add that this is the keystone of the arch. The whole arch will fall without the keystone. Sound human relationships begin with and depend upon trust. Your most valuable possession is freely placed in your custody. Treat it with the utmost respect.

You can see now my theme is leading us toward a vision of the limitless possibilities which are here at Middlebury for student and faculty. I am not, nor ever have been, much impressed by the cynics of today and yesteryear who decry the motivation of students that they go to college as an escape from getting a job, being a soldier or finding a useful role—rather for the student, college is a world rich with new opportunity; if it is a refuge, it is a refuge from the failures of ignorance. By no means is it all sweetness and light; by no means am I suggesting that knowledge insures high moral conduct, for there is always the risk in discovery, in wanting to know—yet know man must and know he will. You recall Adlai Stevenson's retort to the question whether in his youth he thought about becoming President of the United States—his reply was that he did think about it and decided he would just have to run the risk which every red-blood American boy is exposed to. Mankind will just have to run the risk basic to the inherent curiosity of his nature. To this we can say "Amen," and at the same time stretch all our energies toward the art of the utilization of our knowledge—to become more fully man, to actualize as fully as possible our potentialities. Think not then of this as a withdrawal from the world, a world of the ivory tower. Think of college as an engagement with new experience which will find its bearings in the experience of the past and will emerge, if properly understood, in a new independence of mind and firmness of conviction, a new formulation which is your own.

OUR NEEDS FOR FACULTY AND FACILITIES IN THE NATURAL SCIENCES

(*Continued from page 24*)

I will not, at this time, burden you with an extensive decription of our discussions over almost half a year with the representatives of Sasaki-Walker. Suffice to say, that there emerged among us a much clearer picture of the Middlebury campus and its potentialities for growth than had existed before. Perhaps I can best characterize this for you by suggesting that the campus is like some great, winged bird, the main body generally extending from Mead Chapel down to Storrs Avenue with a slight off-shoot in the direction of Le Château. This central area might be described as the area of educational facilities, classrooms, laboratories, libraries, and administration offices. The density in this area is not great and could be expanded very considerably without in any way destroying the delightful areas of green sward between and our lovely trees. Sasaki-Walker pointed out, and it is readily understandable, that if educational facilities were to be established at some distance from this central area, it would be almost impossible for students to get back and forth in the relatively small amount of time between classes without some mode of transportation.

A pattern, then, emerged which seems very logical. Within the general area bounded by Mead Chapel, Le Château, the present library and Storrs Avenue, we would continue to build such educational facilities as the college required from time to time. The great space to the northwest of this central area, for example, the hill north of Pearsons stretching out past the observatory would be available for residences and recreation, as well as other auxiliary enterprises as would the area spreading generally southwestward from the center of the college towards Porter Hospital. Indeed, so wealthy are we in land in comparison with our urban sisters that our city-orientated site planners looked with envy on the possibilities which we seem to have for generations to come. These suggestions seemed to indicate that any new buildings of an educational nature should be constructed in the central area of the campus.

Returning to the events of last fall and winter, Professor Harnest's committee met week after week and indeed, sometimes day after day until there emerged from the suggestions and recommendations of the various departments of the natural sciences the space needs which would indicate the size of the new science center. And these were impressive to say the least. Even when they had been pared down, regrouped and pared down again they were still

impressive. So much so that we despaired almost of accomplishing the unity so vital to our idea of a center.

I do not know how many of you can rapidly visualize a building with 200,000 square feet. Perhaps it will help to understand that a two-story building enclosing this area would cover a good bit of the space between the present library, Old Chapel, Warner Science and Storrs Avenue. Of course, we had no intention of building such a building. Not only would we not wish to build a Pentagon in our backyard but it would quite literally not serve the ends of bringing the sciences together, even though they might be physically in one building.

I will leave to Professor Harnest the details of how a a particular set of buildings emerged from these original space needs. Suffice to say that we have eventually pared the area down and achieved a series of buildings which will neatly fit along the eastern edge of the campus on or near the present site of Storrs Avenue. For purposes of economy, we have incorporated Warner Science into the new science center, reemphasizing the necessity of locating our buildings on this part of the campus. Although the final details of site and building are far from being complete, the plans, in their present state, are practical, exciting, a tribute already to the many people who labored in their production.

Permit me, however, to back away from a subject which Professor Harnest is in a far better position to discuss with you in detail and to complete my brief remarks tonight with a reemphasis of why we are doing some of these things.

There really is only one simple answer to this question. We are creating these facilities for our students because we think they are absolutely necessary to producing the best kind of scientific education within the framework of the liberal arts curriculum. We think our students deserve this and we think we cannot bring it to them in any other way.

We know, however, that buildings alone will not produce the kind of education we seek, which brings me back to my initial proposition that the recruitment of a fine faculty at Middlebury College is our first priority and the creation and development of a science center is only one step in the creation of that goal.

PROGRAM CALLS FOR EXPANSION OF PHYSICAL FACILITIES FOR SCIENCES

(Continued from page 26)

has been retained by providing exclusive use areas for each unit. For example, if current plans become final, the offices, classrooms and calculator laboratory for the Department of Mathematics would be housed as a unit on the ground floor of one of the new elements. The upper three floors would contain the laboratories and offices which are to be used primarily by the Biology Department. The basement floor would contain shared facilities.

Aside from preserving departmental identification, the Science Planning Committee requested this arrangement for an even more significant reason. We have invented the inelegant term "mix-concept" to describe this feature. By it we mean to convey the idea of an intermingling of freshmen, upperclassmen, graduate students (if the department has a graduate program) and faculty. We are convinced that the neophyte science student, whether he be a humanities or science major, will find greater stimulation and challenge if he has the maximum opportunity to rub elbows with the advanced scholar and the professional expert. As noted earlier our future plans call for a marked increase in creative effort on the frontiers by both students and faculty. It might be more efficient to isolate this activity in an ivory tower but our sole reason for being is to inspire, lead and learn with the undergraduate seeking always for the truth. An atmosphere which encourages the highest intellectual endeavor should then be always open to all who enter our halls.

These are the highlights of our vision for the future Middlebury Science Center.

I believe this Center has been conceived in the spirit suggested in March 1964 when President Armstrong invited a group of Middlebury scientists to meet with the trustees and I said, "Now that our attention is focusing on improvements in this area, let us build in such a way that the brilliant high school science scholar cannot wait to start his work at Middlebury, so that his excitement is sustained throughout his college experience, so that his foundation in the knowledge and tools of science is superior and finally that his sense of human values is second to none."

SPORTS

Middlebury ended the fall sports season with an outstanding record turned in by the varsity soccer team and an unimpressive performance by the varsity football squad, although the Panthers closed the season with well played games against Norwich and Vermont.

On the gridiron an inexperienced Panther eleven posted two wins—Worcester Tech, 15–14 and Norwich 14–12—while losing to Wesleyan, 17–0, Williams 28–12, Bates, 20–7, R.P.I., 28–12, and Vermont 7–0.

Coach Joe Morrone's soccer players finished the soccer season undefeated. The Panthers in their history winning streak won the following games: Dartmouth, 2–0, Williams, 5–2, Springfield, 1–0, M.I.T., 6–0, Union, 4–1, Worcester Tech, 1–1, Norwich, 7–1, R.P.I., 5–0, and Vermont, 3–0.

Looking ahead to winter sports, prospects are bright for good seasons in hockey and skiing and maybe even in basketball this year.

The hockey team, which won the small college division in the East last year with a 14–8 record, will be out to improve on this mark. Despite the loss of such players as Tim Carey through graduation, other veterans led by Wayne Halliwell, George Walker and Freeman Allen are expected to take up the slack. A highly talented group of sophomores, who posted a 10–1 freshman mark last year, are expected to fill the gaps and give the team depth.

One of the Panthers' strongest points is the goal with veteran goal tender Pete Brown back. He led the league last year in saves.

Ski fortunes look as bright as a new snowfall for the Panthers. With the loss of only two skiers, Gordie Eaton and Pete Swallow, and the addition of several promising sophomores, Middlebury is in a good position to retain its Eastern Intercollegiate Ski Association title.

The Panther basketball team, which posted a 5–15 mark last year, one of the best in several seasons, will face a tougher schedule in the 1965–66 campaign. Canadian teams Sir George Williams, Loyola of Montreal and C.M.R. have been replaced by Tufts, Springfield and Northeastern.

WINTER SPORTS SCHEDULE

1965-1966

BASKETBALL

Dec.	2	St. Lawrence
	4	Trinity*
	8	Union
	11	Open
	13	St. Michael's*
	16	Tufts*
	17	M.I.T.*
Jan.	8	Wesleyan
	12	Williams
	14	Norwich*
	19	St. Michael's
	21	Vermont*
Feb.	4	Northeastern
	5	Springfield*
	9	Norwich
	11	Hamilton*
	16	Vermont
	23	Amherst*
Mar.	3	Clarkson
	5	R.P.I.*

FRESHMAN

Dec.	2	St. Lawrence
	8	Union
	13	St. Michael's*
Jan.	12	Williams
	14	Norwich*
	19	St. Michael's
	21	Vermont*
Feb.	4	Middlesex
	5	Springfield*
	9	Norwich
	16	Vermont
	23	Amherst*
Mar.	5	R.P.I.*

HOCKEY

Nov.	27	C.M.R.
Dec.	3	Connecticut*
	4	Army*
	9	St. Lawrence
	11	Merrimac
	16	Bowdoin*
	17	Norwich*
Jan.	8	A.I.C.
	13	Dartmouth
	15	R.P.I.
	17	Northeastern*
	21	Amherst
	22	Alumni Game
Feb.	5	Vermont*
	9	Dartmouth*
	11	Hamilton
	12	New Hampshire*
	19	Williams*
	25	Vermont
Mar.	2	Norwich
	4	Colgate*
	5	Hamilton*

FRESHMAN

Dec.	3	Northwood
	4	Norwich*
Jan.	8	Northwood*
	13	Dartmouth
	15	R.P.I.*
Feb.	3	St. Lawrence
	4	Vermont*
	9	Dartmouth*
	12	Deerfield Academy*
	16	Vermont
	18	Williams
Mar.	2	Norwich

*Games away

SKIING

Feb.	5– 6	St. Lawrence Carnival — Canton, N. Y.
Feb.	11–12	Dartmouth Carnival — Hanover, N. H.
Feb.	18–19	Williams Carnival — Williamstown, Mass.
Feb.	25–26	Middlebury Carnival— EISA Championships — Snow Bowl
Mar.	4– 5	Norwich Carnival — Northfield, Vt.

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